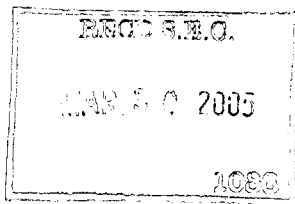




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## Industry-leading Throughput for Aluminum Interconnects

While copper is making its mark in logic applications, aluminum interconnects are still the standard for manufacturing dynamic random access memory (DRAM). Given the relentless decline in the average selling price of memory chips in recent years, it's clear that productivity and cost-efficiency must rule the day in high-volume DRAM manufacturing in order for companies to be profitable.

In this arena, too – just as in the fabrication of copper interconnects on chips – Novellus' INOVA xT is proving its worth. When it comes to manufacturing aluminum interconnects, the INOVA xT's low-cost planar source, industry-leading throughput, and high production yields are causing semiconductor device manufacturers to take notice. By the end of 2004, in fact, Novellus customers had processed more than two-and-a-half million aluminum wafers on INOVA systems worldwide.

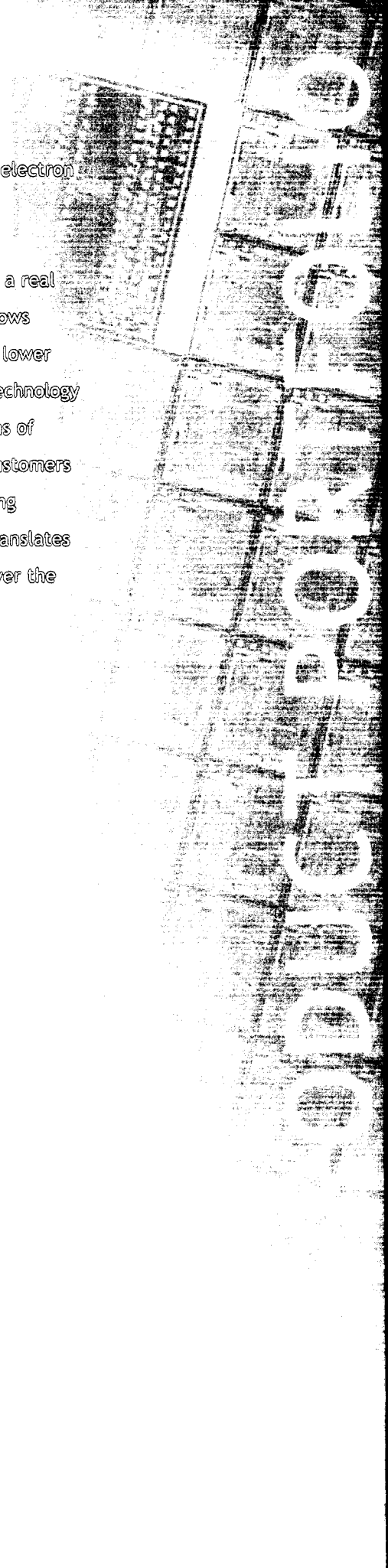
That's trusted productivity.



There's little margin for error in a world where you need an electron microscope to inspect the quality of your product.

In a world of such unforgiving tolerances, Novellus is making a real difference. Our semiconductor manufacturing equipment allows chipmakers to build better chips, with greater efficiency, at lower cost. We do this by providing our customers with innovative technology that allows our systems to extend across multiple generations of semiconductor fabrication. Often, our technology enables customers to collapse the number of steps required in the manufacturing process, saving time and money. Put it all together, and it translates into a legacy of trusted productivity, earned step by step, over the past 20 years.

Innovative technology. Trusted productivity.  
That's Novellus.



# Extending the Boundaries of Copper Barrier-seed Deposition

Copper wires, with their lower resistance, are increasingly replacing aluminum as the primary conductors on semiconductor chips. The advent of the Copper Age is enabling manufacturers to achieve higher device performance, at lower costs, with reduced power requirements.

As semiconductor device geometries shrink, the copper barrier and seed layers on which the conductive wires are formed must evolve to keep pace. Enter Novellus' INOVA® xT copper barrier/seed physical vapor deposition (PVD) system. The INOVA xT employs a unique, air-shielded sputtering source called a Hollow Cathode Magnetron (HCM) that enables the INOVA system to extend PVD all the way down to sub-nanometers (nm). And below that, there's an ion-induced atomic layer deposition module that will enable the INOVA to deposit even monolayers, one atom at a time.

As the industry migrates to copper interconnects, 300-millimeter wafer manufacturing and sub-90 nanometer device sizes, the INOVA xT's extendible technology is paving the way, protecting the investments of our customers well into the future.

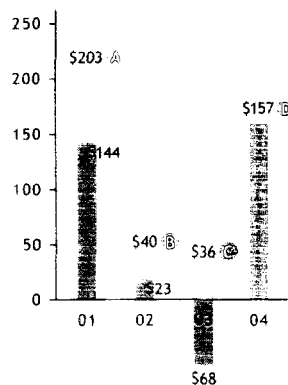
It's innovative technology.



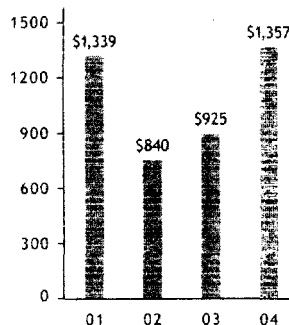
# FINANCIAL HIGHLIGHTS

2004

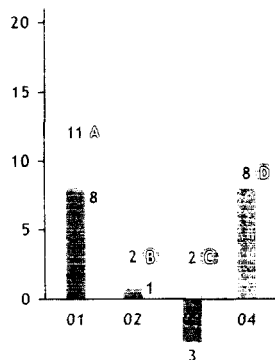
**Net Income (Loss)**  
(millions of dollars)



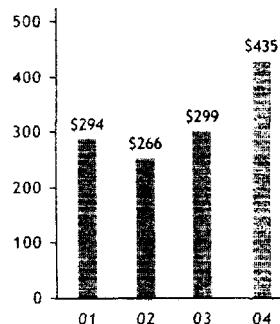
**Net Sales**  
(millions of dollars)



**Return on Shareholders' Equity**  
(percentage)



**Net Shipments per Employee**  
(thousands of dollars)



**A** Our reported net income of \$144.5 million, or \$0.97 per diluted share, for the year ended December 31, 2001 includes pre-tax charges totaling \$84.5 million consisting of \$13.2 million for merger-related costs incurred in conjunction with our acquisition of GaSonic International Corporation, \$47.9 million of restructuring and asset impairment charges, \$7.7 million for the write-off of a bad debt, \$7.1 million of inventory write-downs associated with the restructuring, and \$8.6 million related to the write-down of an investment. Excluding the \$84.5 million in charges, net income would have been \$202.7 million, or \$1.36 per diluted share.

**B** Our reported net income of \$22.9 million, or \$0.15 per diluted share, for the year ended December 31, 2002 includes a \$17.0 million pre-tax charge for the write-off of debt issuance costs related to the retirement of the \$880.0 million Liquid Yield Option Notes, \$6.5 million of pre-tax restructuring and severance charges, a \$7.7 million pre-tax benefit for the recovery of a receivable previously written-off, and a \$4.6 million pre-tax gain on sale of an equity investment. In addition, the 2002 results include an \$11.5 million net loss from SpeedFam-IPEC operations subsequent to the close of the acquisition on December 6, 2002 through December 31, 2002, which includes a \$9.0 million charge for the write-off of in-process research and development. Without these charges and SpeedFam-IPEC's net loss, the 2002 net income would have been \$40.4 million, or \$0.27 per diluted share.

**C** Our reported net loss of \$67.8 million, or \$0.45 per share, for the year ended December 31, 2003 includes \$62.5 million of pre-tax restructuring and other charges, and a non-cash charge of \$62.8 million, net of tax, as a cumulative effect of a change in accounting principle from the consolidation of properties previously accounted for as synthetic leases. Without these charges, net income for 2003 would have been \$35.9 million, or \$0.23 per diluted share.

**D** Our reported net income of \$156.7 million, or \$1.06 per diluted share, for the year ended December 31, 2004 includes net restructuring and other charges of \$1.5 million, acquired in-process research and development write-offs of \$6.1 million, net recovery from legal settlements of \$2.6 million, and the reversal of previously accrued royalty payments of \$8.1 million. Without these charges and benefits, net income would have been \$156.3 million, or \$1.06 per diluted share.

## TO OUR STOCKHOLDERS, CUSTOMERS, PARTNERS AND EMPLOYEES:

One year ago, in last year's annual report, we stated that Novellus was stronger than ever and in an excellent position to resume growth. I'm pleased to report that *growth* was the operative watchword for 2004, a year in which the company achieved a substantial increase in revenues and outstanding profitability. We gained significant market share with some of our most important products, and we extended our presence in rapidly growing markets in Asia. We also added key executive management to our leadership team, strengthening Novellus and preparing the company for growth into a multi-billion dollar corporation.

For the fiscal year ended December 31, 2004, Novellus reported revenues of \$1.4 billion, an increase of 46.7 percent compared to revenues of \$925.1 million in 2003. Net income for 2004 was \$156.7 million, or \$1.06 per diluted share, compared to a net loss of \$67.8 million, or \$0.45 per diluted share, for the previous year. The company ended the year with cash, short-term investments, and restricted cash of \$764.5 million, compared to \$1 billion at the close of 2003.

This reduction in cash was due in large part to the execution of a previously authorized buyback of \$500 million worth of Novellus stock, and the Board has further authorized the buyback of up to \$1 billion more over the next five years. Our combined strategy of expanding our market opportunities and repurchasing shares of stock will provide increased earnings-per-share leverage for our long-term shareholders, and reflects our belief in the company's prospects moving forward.

In addition to the above considerations, results for fiscal year 2004 include net restructuring and other charges of \$1.5 million, acquired in-process research and development write-offs of \$6.1 million, net recovery from legal settlements of \$2.6 million, and the reversal of previously accrued royalty payments of \$8.1 million.

### STAYING AHEAD OF THE COMPETITION

I'm proud of Novellus' financial achievements in 2004, which occurred during what was generally regarded as a solid year across the semiconductor industry. Despite a noticeable slowdown in the marketplace during the final two quarters, we reported near-record revenues and a return to enviable profitability. These achievements were predominantly a function of the expansion of our product portfolio with PVD, CMP, and surface preparation systems, along with the rebound of our core PECVD, tungsten, and HDP businesses. It's noteworthy that these new product areas address the fastest-growing segments within the industry.

Take, for example, the continued migration to copper interconnects in advanced semiconductor manufacturing. According to the most recently available Dataquest estimates, Novellus and our SABRE® NeXT product has captured approximately three-quarters of the worldwide market for copper electrochemical deposition equipment. Copper deposition is one of the fastest-growing segments within the semiconductor industry today, and the success of SABRE NeXT illustrates how our products are positioned to help set the pace for the future of semiconductor manufacturing.

Another example of our penetration of the copper deposition market is provided by Novellus' INOVA physical vapor deposition (PVD) product, which is featured in more detail in the introduction to this year's annual report. INOVA has enjoyed considerable success in the 300-mm arena, and as a result of its market acceptance for copper barrier-seed applications, customers are increasingly using it for subtractive aluminum process applications as well.

Novellus' 300-mm VECTOR plasma-enhanced chemical vapor deposition (PECVD) system has enjoyed similar success, in large measure due to its extraordinary flexibility in high-volume manufacturing environments. The VECTOR can deposit a wide range of dielectric films, from silicon nitride to porous low-k, and at process generations from greater than 250 nanometers down to 45 nanometers and beyond. The market has recognized this excellence: Novellus shipped the 250th VECTOR in 2004, just four years after the system was introduced.

#### OUR STRATEGY IN ACTION

Several new products introduced in 2004 serve as excellent examples of the innovative technology and trusted productivity that Novellus delivers to customers. The most significant was the introduction of XCEDA™, a 300-mm chemical mechanical planarization platform designed to meet technical and cost-of-ownership challenges for technologies at the 65 nm node and below. With its four independent polishing modules, the XCEDA sets a new productivity benchmark for CMP technology. Most important, the tool's unique "through-the-pad" slurry delivery system allows uniform chemical distribution across the wafer while cutting consumable usage.

Just as the XCEDA is raising the bar for innovation and productivity in the CMP market, the new ALTUS® DirectFill™ is doing the same for tungsten deposition. ALTUS DirectFill is a single-system solution for contact and via-fill applications at 65 nm and below which eliminates the need for conventional titanium/titanium nitride toolsets, and simultaneously reduces contact resistance. Moreover, the ALTUS DirectFill can achieve up to a 50 percent reduction in cost-of-ownership.

#### PREPARING NOVELLUS FOR GROWTH

The expansion of Novellus' market presence includes not only a greater diversity of products and technologies, but also a strengthening of our presence in strategic geographic marketplaces. Since approximately two-thirds of our revenues are now derived from Asia, much of our attention is understandably on this market. In 2004 we appointed Dr. Fusen Chen to the post of senior vice-president of Novellus' Asia-Pacific operations, where he'll focus on engaging key customers and driving all aspects of our sales, marketing, process support, and Customer Satisfaction activities throughout this region of increasing opportunity.

One of the ways that Novellus has grown in recent years is through acquisition, and 2004 was no exception. In April we purchased Angstrom Systems, a company that had developed an ion-induced atomic layer deposition (ALD) technology. We quickly integrated this technology onto our INOVA xT platform, and as a result we now have an industry-leading position in ALD technology that we expect to see deployed below 45 nm. Our customers, in fact, are already integrating this technology into some of their most advanced applications. We also acquired Peter Wolters AG, a 200 year-old German company that manufactures high-precision machine manufacturing tools and CMP products used in the high-precision polishing of raw silicon wafers. These acquisitions broaden Novellus' product portfolio to encompass the industrial grinding and polishing market, while also augmenting our existing technologies in CMP.

However, growing into a multi-billion dollar corporation is about more than developing products and technology; it also requires the ability to attract and retain the best people in the industry. To that effect, we've weathered the previous downturn with our people intact, and they're as committed as ever to help take the company to the next level. I believe that we have the people, the management, and the financial muscle to continue our record of achieving higher highs—as well as higher lows, for that matter—in the notoriously cyclical semiconductor capital equipment industry.

During 2004 we brought in a number of talented management executives to help us make the transition to a multi-billion dollar corporation. Along with the previously mentioned Dr. Fusen Chen, earlier in the year we announced the appointment of Dr. Sasson Somekh as president of Novellus, replacing Peter Hanley. Dr. Somekh is a legend within the industry, and he hit the ground running in 2004 by reshaping the way we think about advanced technology, and the timing of its introductions to customers.

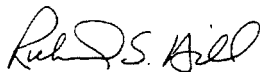
As a result, we now have new products in the hands of our customers' R&D organizations which probably would not have even been talked about for two to three more years. We also named two new members to our board of directors: Neil R. Bonke, former chairman and CEO of Electroglas, Inc., and Dr. Youssef A. El-Mansy, retired vice-president and director of logic technology development at Intel.

#### BUILDING FOR A BRIGHT FUTURE

Moving forward, we have the opportunity to bring substantial operating leverage to Novellus' business. Thanks to our continued R&D spending during the last downturn, we're in an excellent position to bring multiple new products to the market. We intend to take advantage of these opportunities, while also streamlining our operations and processes.

We will continue to develop and market the most innovative and productive tools available for fabricating the advanced integrated circuits of today and tomorrow. We will work to improve our existing products to increase market share. And we will continue to look for opportunities to expand our product portfolio—both through internal development and through external acquisition.

We do all this because we remain committed to delivering outstanding value to all of our shareholders, customers, and employees. I thank all of our long-term shareholders for their commitment to Novellus, just as we remain committed to the stewardship of their assets with the goal of achieving superior growth and return over the years. Speaking for everyone at our company, I look forward to our future with great anticipation.



**Richard S. Hill**

CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

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**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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**Form 10-K**

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FOR ANNUAL AND TRANSITION  
REPORTS PURSUANT TO SECTIONS 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

(Mark One)

- ☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2004

OR

- ☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 000-17157

**Novellus Systems, Inc.**

(Exact name of Registrant as specified in its charter)

**California**

(State or other jurisdiction of  
incorporation of organization)

**77-0024666**

(I.R.S. Employer  
Identification Number)

**4000 North First Street, San Jose, California 95134**  
(Address of principal executive offices including Zip code)

**(408) 943-9700**

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act

**None**

Securities registered pursuant to Section 12(g) of the Act:

**Common Stock, no par value**  
(Title of Class)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes ☒ No ☐

As of June 25, 2004 the aggregate market value of voting and non-voting stock held by non-affiliates of the Registrant was \$4,313,778,859, based on the average of the high and low price of the Common Stock as reported on the NASDAQ National Market on such date. Shares of Common Stock held by officers, directors and holders of more than 5% of the outstanding Common Stock have been excluded from this calculation because such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

The number of shares of the Registrant's Common Stock outstanding on March 4, 2005 was 140,530,177.

**Documents Incorporated by Reference:** Part III of this Annual Report on Form 10-K incorporates information by reference from the Registrant's Proxy Statement for its 2005 Annual Meeting of Shareholders. Except as expressly incorporated by reference, the Registrant's Proxy Statement shall not be deemed to be a part of this Annual Report on Form 10-K.

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**NOVELLUS SYSTEMS, INC.**  
**2004 ANNUAL REPORT ON FORM 10-K**

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## PART I

The following information should be read in conjunction with the Consolidated Financial Statements and notes thereto included in this Annual Report on Form 10-K.

### Item 1. *Business*

#### **The Company**

Novellus Systems, Inc., a California corporation organized in 1984, develops, manufactures, sells and supports equipment used in the fabrication of integrated circuits, commonly called microchips or chips. The customers for these products are semiconductor device manufacturers who produce chips for sale or for incorporation in their own products, or who provide chip manufacturing services to third parties.

Integrated circuits are generally built on a silicon wafer base and include a large number of different components, such as transistors, capacitors and other electronic devices that are connected by multiple layers of wiring, or interconnects. To build an integrated circuit, transistors are first created on the surface of the silicon wafer. Wiring and insulating structures are then added as multiple thin-film layers through a series of manufacturing process steps. Typically, a first layer of dielectric (insulating) material is deposited on top of the transistors. Subsequent layers of metal (historically, aluminum) are deposited on top of this base layer, etched to create the conductive lines that carry the electricity, and then filled with dielectric material to create the necessary insulators between the lines, in a manufacturing process called subtractive aluminum. When copper wires are being constructed, the manufacturing process, called copper damascene, is a mirror image of that described above: the insulator (dielectric) is etched, and the copper wiring is created in the etched insulator via a high-technology electrochemical deposition process called Electrofill<sup>TM</sup>. Building either copper or aluminum wiring requires these manufacturing steps to be repeated many times: advanced chip designs may require as many as 500 process steps.

Novellus has historically focused on a single aspect of the semiconductor device process, the deposition of conducting and insulating material films. Novellus' advanced deposition systems use chemical vapor deposition (CVD), physical vapor deposition (PVD), and electrochemical deposition (ECD) processes to form the interconnects in the device structure. Our High-Density Plasma CVD (HDP) and Plasma-Enhanced CVD (PECVD) systems employ a chemical plasma to deposit all of the dielectric or insulating layers. Our CVD Tungsten systems are used to deposit tungsten plug films. Our PVD systems use direct-current power to deposit conductive metal layers by sputtering metallic atoms from the surface of a target source. Our Electrofill<sup>TM</sup> (ECD) systems are used for depositing conductive layers of copper on wafers in a damascene manufacturing process.

Beginning in 2001, Novellus expanded beyond deposition technologies into the area of wafer surface preparation. That year, we acquired GaSonics International Corporation, a manufacturer of systems used to clean and prepare a wafer surface. In 2002, we acquired SpeedFam-IPEC, Inc., a manufacturer of chemical mechanical planarization (CMP) products. In 2004, we further diversified by acquiring Peter Wolters AG, a 200-year-old German company specializing in lapping and polishing equipment for a number of different industries. With the acquisition of Peter Wolters, Novellus entered into market sectors beyond semiconductor manufacturing for the first time. In December 2004, the board approved the creation of Novellus Development Company LLC, with funding of up to \$10 million, for investment in private companies at various stages of development.

Our headquarters are located at 4000 North First Street, San Jose, California 95134 and our telephone number is (408) 943-9700.

Additional information about Novellus is available on our web site at [www.novellus.com](http://www.novellus.com). We make available free of charge on our web site our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, and our Current Reports on Form 8-K, as well as amendments to those Reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. These reports are available as soon as reasonably practicable after we electronically file them with — or furnish them to — the Securities and Exchange Commission, or the SEC. Information contained on our web site is not part of this Annual Report on Form 10-K or of our other filings with the SEC.



## Semiconductor Industry Background

Over the past twenty years, the semiconductor industry has grown rapidly as a result of increasing demand for personal computers, the expansion of the Internet and the telecommunications industry, and the emergence of new applications in consumer electronics. More recently, growth has slowed, and there are signs that the industry is beginning to mature. While unit demand for semiconductor devices continues to rise, the average selling prices of chips continue to decline. There is growing pressure on semiconductor device manufacturers to reduce manufacturing costs while increasing the value of their products. The semiconductor industry has also been historically cyclical, with periods of rapid expansion followed by periods of over-capacity.

Several technological trends characterize semiconductor manufacturing. Perhaps the most prominent of these trends is the increasing density of the integrated circuit. Moore's Law, first postulated in the mid-1960s and still substantially accurate almost 40 years later, states that the density of circuitry on an individual semiconductor chip doubles every 18 months. Today's advanced devices are being manufactured with line widths as small as 90 nanometers, and with up to ten layers of interconnect circuitry. By increasing circuit density, manufacturers can pack more electronic components on a chip and thereby provide higher performance and value.

Another trend worth noting is the transition to copper wiring from aluminum wiring as the primary conductive material in semiconductor devices. Copper has a lower electrical resistance value than aluminum, which provides a number of performance advantages. Because of the superior properties of copper, a chip made with copper may need only half as many metal layers as one made with aluminum, providing considerable reduction in manufacturing cost. In addition, copper wiring produces a substantial improvement in device performance and a significant reduction in power requirements in comparison to aluminum.

A similar transition is underway from traditional insulating films made of silicon oxide to insulators with a low dielectric constant, or "low-k". Low-k dielectrics reduce the capacitance between metal lines in a device. This improves the speed and performance of the chip. However, low-k materials are more fragile than silicon oxide, and this poses a host of new challenges to the semiconductor industry in integrating the new materials into a manufacturing process flow.

Another important trend is the move to larger wafer sizes. Semiconductor device manufacturers are now migrating to larger, 300mm wafers because of the potential manufacturing cost advantages of these larger wafers compared to 200mm. The 300mm wafers provide in excess of 2.25 times the number of chips per wafer, and hence may provide significant economies of scale in the manufacturing process.

These trends shape the equipment and process demands of our customers. Our customers generally measure the cost and performance of their production equipment in terms of "cost per wafer," a ratio determined by factoring in the costs for acquisition and installation of a system, operating costs, and net throughput rate. In a fixed period of time, a system with higher net throughput allows a manufacturer to recover the purchase price over a greater number of wafers, thereby reducing the cost of ownership of the system on a per-wafer basis. Yield and film qualities are also significant factors in selecting processing equipment. The increased cost of larger and more complex semiconductor wafers have made high yields extremely important to our customers. To achieve elevated yields and better film quality, systems must be able to repeat a process consistently and reliably. This characteristic, known as repeatability, is critical in achieving commercially acceptable yields. Systems that operate at desired throughput rates without approaching critical tolerance limits can achieve repeatability more easily.

## Semiconductor Business Strategy

Our business objective is to use our core expertise to increase our market share in semiconductor manufacturing process equipment, and strengthen our position as a leading supplier to the semiconductor industry. The following are the key elements of our strategy:

*Emphasize High-Productivity Systems* — We established our current position in the industry by emphasizing high productivity as the principal benefit that our products and technologies deliver to customers. Our unique multi-station sequential deposition, or MSSD™, system for continuous PECVD processing illustrates our commitment to productivity. The MSSD™ design enables our PECVD systems to attain very high levels of wafer throughput, uniformity and overall film quality. The simple architecture of our systems also takes up less space in the fabrication

facility and requires less downtime than other system designs. We intend to retain our historical focus on productivity by applying our MSSD™ architecture in product enhancements and new product offerings.

*Be Recognized as the Technology Leader in our Served Available Markets* — In the era of nanoelectronics manufacturing, technology leadership becomes critically important due to the difficulties in manufacturing chips at challenging design rules. It is our strategy, then, to provide our customers with leading edge technologies in each of our served available markets.

*Focus on Reducing Customer Costs* — Cost is an important component when measuring overall productivity. To that end, we strive to provide products and technologies that reduce our customers' overall cost of ownership by offering semiconductor device manufacturers a number of process improvements and process differentiators, as well as by providing highly reliable systems that require less servicing than competing alternatives in the market. We also strive to design our systems to be extendible over multiple process generations.

*Broaden our Interconnect Offerings* — As semiconductor manufacturing technology becomes more complex, the interconnect structures on a chip take on greater importance in the manufacturing process. We believe that by expanding beyond our historical focus on deposition products, we can add value in related interconnect manufacturing process steps. The acquisitions of GaSonics and SpeedFam-IPEC are examples of this strategy in action. Our goal is to be the leading industry supplier of interconnect manufacturing equipment.

*Differentiate our Service Philosophy* — Our philosophy is to develop reliable products that require less servicing than competing alternatives. We strive to provide support that minimizes the downtime and service costs that our customers experience.

*Expand Market Presence in Asia* — While we derive a significant percentage of net sales from Asia, we believe that substantial additional growth potential exists in the region over the long term. Japan, Taiwan and Korea continue to represent a significant portion of the world's capacity for semiconductor manufacturing, and China is rapidly becoming a major manufacturing region for the industry. Our local presence in Asia includes sales and support offices throughout Japan. In addition, we maintain four offices in Korea, three in China, three in Taiwan, and one each in Malaysia, Singapore and India.

*Leverage our Low Cost Manufacturing Structure* — We perform all system design, assembly and testing in-house, and outsource the manufacture of major subassemblies. This manufacturing strategy allows us to minimize our fixed costs and capital expenditures and gives us the flexibility to increase capacity as needed. Outsourcing also allows us to focus on product differentiation through system design and quality control, and helps to ensure that our subsystems incorporate the latest third-party technologies in robotics, gas panels and microcomputers. We work closely with our suppliers to achieve mutual cost reduction through joint development projects.

## **Semiconductor Manufacturing Products**

### ***Deposition Technologies***

Our historical strength is rooted in deposition products, where we have consistently maintained a leadership position in the industry. We currently offer products that address the needs of manufacturers across a number of different deposition technologies — CVD, PVD and ECD.

Since the introduction of our Concept One dielectric platform in 1987, we have offered a range of processing systems for dielectric and metal deposition. In 1991, we introduced the Concept Two platform — a modular, integrated production system capable of depositing both dielectric and conductive metal layers by combining one or more processing chambers with a common, automated wafer handler. The Concept Two enabled semiconductor device manufacturers to increase production throughput and system capability by adding process modules, without having to replace existing equipment. In 1997, we introduced the Concept Three platform, which built on the foundation of Concept Two to offer greater throughput in 300mm wafer manufacturing applications.

### ***CVD Products***

In the CVD process, manufacturers place wafers in a reaction chamber, introduce a variety of pure and precisely metered gases into the chamber, and then add some form of energy to activate a chemical reaction that deposits a film on the wafer. The CVD process is the traditional method used to deposit dielectric films on wafers.

Manufacturers also use CVD to deposit conductive metal layers, particularly tungsten, as it is difficult to deposit such layers on devices with very small features when using conventional PVD or other deposition technologies.

#### ***HDP CVD Products***

**Concept Two SPEED®** — Introduced in 1996, Concept Two SPEED was the semiconductor industry's first high-density plasma system capable of high-volume manufacturing. Today, Concept Two SPEED is one of the top two product offerings for the HDP CVD marketplace. Concept Two SPEED is a single-wafer processing system for 200mm substrates, and was originally designed to deposit dielectric materials in an aluminum interconnect manufacturing process. However, today, Concept Two SPEED is primarily used to deposit shallow trench isolation (STI) as part of the transistor formation, as well as deposit pre-metal layer dielectrics (PMD) in both aluminum or copper based devices.

**Concept Three SPEED®** — Introduced in 1997, the Concept Three SPEED is designed to apply dielectric material in the 300mm wafer manufacturing processes. Because it is based on our production-proven Concept Two product, Concept Three SPEED offers minimal risk to our customers in making the transition from 200mm to 300mm wafers.

**SPEED® NExT™** — Introduced in 2004, the SPEED NExT system for 300 mm wafers is designed specifically to address the challenges of dielectric gap fill at 65 nm and beyond. SPEED NExT builds upon the superior high conductance chamber design of the existing SPEED platform with an innovative source technology that enables repeatable gap fill across a 300-mm wafer. In addition, the ability to control the wafer position relative to the source allows SPEED NExT to have a wider gap fill process window.

#### ***W-CVD Products***

**Concept Two ALTUS** — In 1994, we introduced the Concept Two ALTUS, used to deposit the tungsten plugs and vias that connect aluminum interconnect lines in aluminum-based chips. The Concept Two ALTUS combines the modular architecture of the Concept Two with an advanced tungsten CVD dual-process chamber. The ALTUS' pulsed nucleation layer (PNL™) technology also permits the system to deposit conformal film in device structures with extremely high aspect ratios, an advantage that has translated into a market leadership position for Novellus in tungsten deposition.

**Concept Three ALTUS** — The Concept Three ALTUS, introduced in 1997, provides the same advantages to 300mm wafer tungsten deposition as its Concept Two ALTUS predecessor delivers for 200mm wafer applications.

**ALTUS DirectFill™** — Introduced in 2004, the ALTUS DirectFill tungsten nitride/tungsten deposition system is designed for advanced contact and via-fill applications at 65 nm and below. ALTUS DirectFill simplifies the tungsten deposition process by replacing the standard multi-tool Ti/TiN/W approach with a single three-module system. The advanced plug-fill technology of the ALTUS DirectFill can reduce contact resistance and lower the overall cost of ownership by 50% or more when compared to existing processes.

#### ***PECVD Products***

**Concept Two SEQUEL Express®** — Introduced in 1999, the Concept Two SEQUEL Express is designed to deposit our CORAL® family of low-k dielectric films, as well as other advanced films required for manufacturing 0.18 micron-and-smaller semiconductor devices. With a throughput in excess of 110 wafers per hour, Concept Two SEQUEL Express delivers up to 40 percent higher capital productivity and 40 percent lower cost of ownership than competing PECVD systems.

**VECTOR®** — Introduced in 2000, VECTOR is a PECVD system for depositing dielectric films on 300mm wafers. VECTOR delivers all the dielectric films required for a low-k device at 90 nanometer-and-smaller design rules. Our VECTOR has approximately two-thirds the footprint of the nearest competitor and 33% fewer critical subsystems.

#### ***PVD Products***

PVD, also known as "sputtering," is a process where ions of an inert gas such as argon are electrically accelerated in a high vacuum toward a target of pure metal, such as tantalum or copper. Upon impact, the argon

ions sputter off the target material, which is then deposited as a thin film on the silicon wafer. PVD processes are used to create the barrier and seed layers in copper damascene interconnect applications. We entered the PVD marketplace with the acquisition of Varian Associates' Thin Film Systems Division in 1997.

**INOVA®** — The INOVA 200mm system was originally developed by the Thin Films Systems division of Varian Associates, acquired by Novellus in 1997. Novellus reintroduced the product in 1998 with the addition of a patented Hollow Cathode Magnetron (HCM™) ionized PVD source that was designed specifically for the deposition of copper barrier and seed films. The INOVA continues to gain market acceptance based on its superior barrier seed step coverage in advanced geometries.

**INOVA xT** — In 2000, we introduced the 300mm INOVA xT, which features HCM technology. The INOVA xT continues to offer superior barrier performance which leads to low via resistance and improved device reliability.

### ***Electrochemical Deposition Products***

Our Electrofill™ products are used to build the copper primary conduction layers in advanced integrated circuits. Electrofill uses a copper electrolytic solution to create lines and vias in a dielectric layer which has been etched with the pattern of the circuitry, in a process called copper damascene. Our highly reliable and cost-effective Electrofill™ products employ aqueous chemistries to deposit the copper wiring into the dielectric structure.

**SABRE** — The SABRE copper Electrofill™ system, introduced in 1998, is one of the most reliable and technologically advanced copper ECD systems available on the market. SABRE meets today's technology requirements for copper metal layers at 65 nanometer and beyond. The SABRE employs a proprietary electrofill cell that prevents contamination of the back of the wafer with copper. It features a unique plating cell design that improves the repeatability of the copper fill. The simplicity of SABRE's design is the key to the system's high reliability and manufacturing availability. When coupled with the INOVA PVD system, SABRE provides a complete system for depositing advanced copper interconnects.

**SABRE xT** — The second generation SABRE xT, introduced in 1999, is the industry's leading ECD platform for both 200mm and 300mm wafers. New features on the SABRE xT that were not found on the original SABRE include advanced plating chemistries, an integrated anneal module and closed-loop chemical monitoring.

**SABRE NExT** — Introduced in 2003, the SABRE NExT, or the Nano Era xT, builds on the SABRE xT's production track record, offering a proprietary chemistry, a new anode cell design and other hardware refinements to tackle the complex process requirements of 90 nanometer, 65 nanometer and 45 nanometer interconnect structures. In comparison to the SABRE xT, the SABRE NExT reduces chemical costs by over 30%, and when combined with its improved throughput, cuts overall cost of ownership by over 10% on what is already a highly productive process.

### ***Surface Preparation Technologies***

Photoresist strip and clean processes represent an area of semiconductor manufacturing that is becoming increasingly important with the industry's migration to copper interconnects. Semiconductor device manufacturers use surface preparation products to remove photoresist and other potential contaminants from a wafer before proceeding with the next deposition step in the manufacturing process. We entered this application in 2001, and today we are one of the industry's leading suppliers of dry-clean surface preparation products.

**GAMMA™ 2100** — The GAMMA 2100 200mm photoresist removal system uses a plasma source to strip photoresist. The GAMMA architecture features a multi-station sequential processing design with six strip stations, resulting in high wafer throughput with a minimal number of critical subsystems.

**GAMMA 2130** — The GAMMA 2130 system is our photoresist strip system for 300mm wafers. Our multi-station sequential processing architecture incorporates six stations within a single process chamber, enabling a 30% higher throughput rate than the closest competitor.

**PEPIRIDIA®** — The PEPIRIDIA is an advanced cleaning system designed for sub-0.18-micron 200mm wafer applications. The IRIDIA's modular architecture allows manufacturers to configure the system for both front-and

back-end-of-line cleaning applications down to 90 nanometers. Targeted at critical steps in the copper and low-k manufacturing processes, the IRIDIA offers the highest productivity of any 200mm dry-clean system currently on the market.

### ***CMP Technologies***

CMP systems polish the surface of a wafer after a deposition step to create a planar surface before moving on to subsequent manufacturing steps. Since copper films are more difficult to polish than the tungsten and oxide films used in previous-generation aluminum interconnects and since low-k dielectrics are much more porous than their predecessors, CMP has been elevated to the forefront of the enabling technologies required in a copper damascene manufacturing process. In recognition of this trend, we acquired SpeedFam-IPEC, a global supplier of CMP systems used in the fabrication of advanced copper interconnects, in 2002. We believe that the opportunity to understand the interactions between planarization, deposition and surface preparation steps and optimize them for overall performance gives us an important advantage in extending copper and low-k processes to advanced semiconductor devices.

**MOMENTUM™** — MOMENTUM is a high-throughput, dry-in/dry-out CMP system for all 200mm wafer process applications. Designed with extendibility to accommodate future reductions in line widths, the MOMENTUM has four independent wafer-polishing platens that allow for maximum manufacturing flexibility. MOMENTUM also employs an orbital polishing motion and features a through-the-pad slurry delivery system that results in more efficient consumption of polishing chemicals, minimized dishing and reduced erosion.

**XCEDA™** — Introduced in 2004, the XCEDA copper CMP system is an advanced 300-mm platform designed to exceed both the technical and economic requirements of CMP at 65 nm and beyond. The XCEDA's four polishing modules and through-the-pad slurry delivery system can reduce slurry usage by up to 40%, dramatically reducing cost-of-ownership. The XCEDA system has also demonstrated quality planarization results on porous ultra low-k (ULK) materials with k-values of less than 2.0.

### **Marketing, Sales and Service**

We rely on a direct sales force to sell our products in all geographic regions in the world where semiconductors are manufactured, including Europe, the United States, Korea, Japan, China, Taiwan, and Southeast Asia.

The ability to provide prompt and effective field support is critical to our sales efforts, and we believe the support that we provide to our installed base has accelerated the penetration of certain key accounts. We also believe that our marketing efforts are enhanced by the technical expertise of our research and development personnel, who provide customer process applications support and participate in a number of industry forums, conferences and technical symposia.

### **Customers**

For the year ended December 31, 2004, Taiwan Semiconductor Manufacturing Company, Ltd., UMC (United Microelectronics Corporation) and Intel Corporation, each accounted for 10% of our net sales. For the year ended December 31, 2003, Samsung and Intel Corporation accounted for 27% and 12% of our system sales, respectively. For the year ended December 31, 2002, Samsung, Intel Corporation, Taiwan Semiconductor Manufacturing Company, Ltd. and IBM Corporation accounted for 17%, 11%, 11% and 10% of our system sales, respectively. Historically, we have sold a significant proportion of systems in any particular period to a limited number of customers. System sales to our ten largest customers in 2004, 2003 and 2002 accounted for 69%, 76% and 79% of our system sales, respectively. We expect that sales of our products to relatively few customers — none of which has entered into a long-term agreement requiring it to purchase our products — will continue to account for a high percentage of our net sales in the foreseeable future.

Export sales outside of the United States for the year ended December 31, 2004 were \$1.0 billion, or 77% of net sales. For the year ended December 31, 2003, export sales were \$603.5 million, or 65% of net sales, while export sales for the year ended December 31, 2002 were \$513.6 million, or 61% of net sales.

## **Backlog**

As of December 31, 2004, our backlog was \$474.7 million, with approximately \$3.4 million of cancellations in the period subsequent to December 31, 2004 to the date of this Annual Report on Form 10-K. As of December 31, 2003, our backlog was \$341.0 million, with approximately \$8.6 million of cancellations subsequent to December 31, 2003. Our backlog includes only those customer orders for which we have accepted purchase orders and assigned shipment dates within twelve months. All orders are subject to cancellation or rescheduling by customers, with limited or no penalties. Some products are shipped in the same quarter in which the order was received. For this reason, and because of possible changes in delivery schedules, cancellations of orders and delays in shipments, our backlog as of any particular date is not necessarily a reliable indicator of actual shipments for any succeeding period.

## **Research and Development**

The highly cyclical semiconductor manufacturing industry is subject to rapid technological change and continual new product introductions and enhancements. Our ability to remain competitive depends on our success in developing new and enhanced systems, and introducing them at competitive prices on a timely basis. For this reason, we devote a significant portion of our personnel and financial resources to research and development programs.

Our current research and development efforts are directed at developing new systems and processes and improving the capabilities of existing systems. Research and development programs include advanced PVD systems, advanced gap fill technology, primary conductor metals, low-k dielectric materials, CMP systems, and additional advanced deposition and surface preparation technologies for the next generation of smaller-geometry fabrication lines. All new systems under development are capable of processing 300mm wafers.

Expenditures for research and development, excluding charges for acquired in-process research and development, during 2004, 2003 and 2002 were \$252.1 million, \$227.4 million and \$222.3 million, respectively. These expenditures represented approximately 19%, 25% and 26% of our net sales in 2004, 2003 and 2002, respectively. We believe that research and development expenditures will continue to represent a substantial percentage of our net sales in the future.

## **Manufacturing**

Our manufacturing activities consist primarily of assembling and testing components and subassemblies that we acquire from third-party vendors and then integrate into a finished system. We utilize an outsourcing strategy for the manufacture of major subassemblies, and we perform all system design, assembly and testing in-house. Our outsourcing strategy enables us to minimize fixed costs and capital expenditures, and provides us with the flexibility to increase production capacity. This strategy also allows us to focus on product differentiation through system design and quality control. We believe that our use of outsourced product specialists enables our subsystems to incorporate the latest and most advanced technologies in robotics, gas panels and microcomputers without the need for in-house expertise. We strive to work as closely as possible with all of our suppliers to achieve mutual cost reduction through joint development efforts.

Although we make reasonable efforts to ensure that such parts are available from multiple suppliers, certain key parts may only be obtained from a single or limited source. These suppliers are, in some cases, thinly capitalized, independent companies who generate significant portions of their business from us and/or a small group of other companies in the semiconductor industry. We seek to reduce our dependence on single or limited source suppliers. However, disruptions in parts delivery or termination of certain of these suppliers may occur, and such disruptions and terminations could have an adverse effect on our operations. A prolonged inability to obtain certain parts could have a material adverse effect on our business, financial condition or results of operations, and could result in our inability to meet customer demands on time.

We manufacture our systems in clean-room environments similar to those used by semiconductor manufacturers for chip fabrication, which helps to minimize the amount of particulates and other contaminants in the final assembled system and to improve yields for our customers. Following assembly, we package our completed systems in plastic shrink-wrap to maintain clean-room standards during shipment.

## **Competition**

Significant competitive factors in the semiconductor equipment market include system performance and flexibility, cost, the size of each manufacturer's installed customer base, customer support capability and the breadth of a company's product line. We believe that we compete favorably in all of the market segments we serve because of the fundamental advantages associated with our system performance and flexibility, low cost of ownership, high wafer yields and customer support. However, we face substantial competition from both established competitors and potential new entrants in each of these markets. Installing and integrating capital equipment into a semiconductor production line represents a substantial investment. For this reason, once a manufacturer chooses a particular vendor's capital equipment, experience has shown that the manufacturer will generally rely upon that equipment for the useful life of the specific application. As a result, all of today's semiconductor equipment makers typically have difficulty in selling a product to a particular customer to replace or substitute for a competitor's product previously chosen or qualified by that customer.

In the CVD, PECVD, HDP and PVD markets, our principal competitor is Applied Materials, Inc., a major supplier of systems who has established a substantial base of installed equipment among today's leading semiconductor manufacturers. In the PECVD market, we also compete against ASM International. In the ECD market, our principal competitors are Applied and Semitool, Inc. Our principal competitors in the surface preparation product arena are Mattson Technologies, Inc. and Axcelis Technologies, Inc. In the CMP market, our major competitors are Applied and Ebara Corporation.

## **Patents and Proprietary Rights**

We intend to continue to pursue patent and trade secret protection for our technology. We currently hold over 475 patents. We have many pending patent applications, and we intend to file additional patent applications as appropriate. There can be no assurance that patents will be issued from any of these pending applications or future filings, or that any claims allowed from existing patents or pending or future patent applications will be sufficiently broad to protect our technology. While we intend to vigorously protect our intellectual property rights, there can be no assurance that any patents we hold will not be challenged, invalidated or circumvented, or that the rights granted thereunder will provide competitive advantages to us. See Item 3. Legal Proceedings, for further discussions.

We also rely on trade secrets and proprietary technology that we protect through confidentiality agreements with employees, consultants, and other parties. There can be no assurance that these parties will not breach those agreements, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known to or independently developed by others.

There has been substantial litigation regarding patent and other intellectual property rights in semiconductor-related industries. We are currently involved in such litigation. Except as set forth in Item 3. Legal Proceedings, we are not aware of any significant claim of infringement by our products of any patent or proprietary rights of others; however, we could become involved in additional litigation in the future. Although we do not believe the outcome of current litigation will have a material impact on our business, financial condition or results of operations, no assurances can be given that current or future litigation will not have such an impact. For further discussion see Item 3. Legal Proceedings.

In addition to current litigation, our operations, including the further commercialization of our products, could provoke additional claims of infringement from third parties. In the future, litigation may be necessary to enforce patents issued to us, to protect trade secrets or know-how that we own, to defend ourselves against claimed infringement of the rights of others, or to determine the scope and validity of the proprietary rights of others. Any such litigation could result in substantial cost and diversion of efforts and could have a material adverse effect on our financial condition or operating results. In addition, adverse determinations in such litigation could result in loss of proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses from third parties, or prevent us from manufacturing or selling our products. Any of these occurrences could have a material adverse effect on our business, financial condition or results of operations.

## **Employees**

On December 31, 2004, we had 3,505 full-time and temporary employees. This includes the acquisition of Peter Wolters AG. None of our employees are represented by a labor union, and we have never experienced a work stoppage, slowdown or strike. We consider our employee relations to be good.

The success of our future operations depends in large part on our ability to recruit and retain senior management, engineers, technicians, marketing, sales and service professionals and other key personnel. Qualified people are in great demand across each of these industry disciplines, and there can be no assurance that we will be successful in retaining or recruiting key personnel.

## Business Combinations

We purchased all of the outstanding capital stock of Peter Wolters for an aggregate purchase price, excluding transaction costs, of approximately \$149.5 million in cash on June 28, 2004. The Company funded the purchase price of the acquisition with borrowings under a credit facility with JPMorgan Chase Bank.

We acquired SpeedFam-IPEC on December 6, 2002 in a stock-for-stock acquisition. Each share of SpeedFam-IPEC common stock and stock options outstanding as of December 6, 2002 was converted into 0.1818 of a share of Novellus common stock or options on a fixed exchange ratio basis.

## Environmental Matters

Neither compliance with federal, state and local provisions regulating discharge of materials into the environment, nor remedial agreements or other actions relating to the environment, has had, or is expected to have, a material effect on our capital expenditures, financial condition, results of operations or competitive position.

## Item 2. Properties

Information regarding our principal properties at December 31, 2004 is as follows:

# of Buildings	Location	Operating Segment	Use	Ownership	Square Footage
9	San Jose, CA	Semiconductor Group	Corporate Headquarters, Manufacturing, Research and Development, Engineering, Applications Demonstration Lab, Customer Support, Administration and Warehousing	Owned	642,000
4	Tualatin, OR	Semiconductor Group	Manufacturing, Research and Development, Engineering, Customer Support, Administration and Warehousing	Owned	442,000
1	Chandler, AZ	Semiconductor Group	Manufacturing, Research and Development, Engineering, Customer Support, Administration and Warehousing	Leased	108,000
1	Des Plaines, IL	Industrial Applications Group	Manufacturing, Research and Development, Owned Engineering, Customer Support, Administration and Warehousing	Owned	41,000
1	Plainville, MA	Industrial Applications Group	Research and Development, Engineering, Customer Support, and Warehousing	Owned	25,000
1	Leicestershire, UK	Industrial Applications Group	Manufacturing, Customer Support, Administration and Warehousing	Owned	9,000
1	Rendsburg, Germany	Industrial Applications Group	Manufacturing, Research and Development, Engineering, Customer Support, Administration and Warehousing	Owned	189,000
<b>Total</b>				Owned	1,348,000 Sq. Ft.
				Leased	108,000 Sq. Ft.



In addition to the above properties used by our Semiconductor Group operating segment, we lease several domestic field offices totaling approximately 59,000 square feet of space. We also lease several sites outside the United States that we use as sales and customer service centers. These sites total approximately 185,000 square feet of space. Our facilities in Europe include approximately 48,000 square feet of leased space in various countries including France, Germany, Italy, and Ireland. Our facilities in Asia include approximately 137,000 square feet of leased space in various countries including China, India, Japan, Korea, Malaysia, Singapore and Taiwan. We also lease approximately 778,000 square feet of space in and around San Jose, California and Chandler, Arizona, all of which is occupied by subtenants or available for sublease.

In addition to the above properties used by our Industrial Applications Group operating segment, we lease three field offices totaling approximately 3,000 square feet in Germany, China and Japan. We also sublease approximately 65,000 square feet of space in Mettmann, Germany.

We believe that our current facilities are sufficient to meet our requirements for the foreseeable future.

### **Item 3. *Legal Proceedings***

#### **Applied Materials, Inc.**

On September 20, 2004, we settled all pending patent litigation with Applied Materials, Inc., "Applied", by entering into a Binding Memorandum of Understanding with Applied. The Memorandum of Understanding was effective as of September 3, 2004.

#### **Semitool, Inc.**

On October 11, 2004, we settled the pending patent litigation with Semitool, Inc. pursuant to the terms of a settlement agreement effective October 8, 2004.

#### **Plasma Physics Corporation and Solar Physics Corporation**

On June 14, 2002, certain of our present and former customers — including Agilent Technologies, Inc., Micron Technology, Inc., Agere Systems, Inc., National Semiconductor Corporation, Koninklijke Philips Electronics N.V., Texas Instruments, Inc., ST Microelectronics, Inc., LSI Logic Corporation, International Business Machines Corporation, Conexant Systems, Inc., Motorola, Inc., Advanced Micro Devices, Inc. and Analog Devices Inc. — were sued for patent infringement by Plasma Physics Corporation and Solar Physics Corporation. We have not been sued by Plasma Physics, Solar Physics, or any other party for infringement of any Plasma Physics or Solar Physics patent. Certain defendants in the case, however, contend that we allegedly have indemnification obligations and liability relating to these lawsuits. We believe that these matters will not have a material adverse impact on our business, financial condition, or results of operations. There can be no assurance, however, that Novellus would prevail in a future lawsuit filed in connection with the alleged indemnification obligations, if such a lawsuit were brought. If one or more parties were to prevail against us in such a suit and damages were awarded, the adverse impact on our business, financial condition, or results of operations could be material. However, due to the uncertainty surrounding the litigation process, we are unable to estimate a range of loss, if any, at this time.

#### **Linear Technology Corporation**

In March, 2002, Linear Technology Corporation (Linear) filed a complaint against Novellus, among other parties, in the Superior Court of the State of California for the County of Santa Clara. The complaint seeks damages (including punitive damages) and injunctions for causes of actions involving alleged breach of contract, fraud, unfair competition, breach of warranty and declaratory relief. On September 3, 2004, Novellus filed a demurrer to all causes of action in the complaint, which the Court granted without leave to amend on October 5, 2004. On January 19, 2005, we received notice that Linear intends to appeal the court's order granting judgment in favor of Novellus. Although we prevailed on these claims in the Superior Court, it is possible that the Court of Appeals will reverse the ruling of the Superior Court, in which case Novellus could face potential liability on these claims. We cannot predict how the Court of Appeals will rule on this issue or, if it does rule against Novellus, estimate a range of potential loss, if any, due to the uncertainty of the litigation process.

### **Other Litigation**

We are a defendant or plaintiff in various actions that arose in the normal course of business. We believe that the ultimate disposition of these matters will not have a material adverse effect on our business, financial condition or results of operations. However, due to the uncertainty surrounding the litigation process, we are unable to estimate a range of loss, if any, at this time.

### **Item 4. *Submission of Matters to a Vote of Security Holders***

Not applicable.

## PART III

### Item 5. *Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities*

#### Stock Information

Novellus' common stock is traded on the NASDAQ Stock Market and is quoted on the NASDAQ National Market under the symbol "NVLS." The following table sets forth the closing high and low prices of our common stock as reported by the NASDAQ National Market for the periods indicated:

	2004	
	High	Low
First Quarter .....	\$ 44.44	\$ 29.15
Second Quarter .....	34.64	28.48
Third Quarter .....	31.44	23.13
Fourth Quarter .....	29.55	24.15

	2003	
	High	Low
First Quarter .....	\$ 34.74	\$ 25.27
Second Quarter .....	38.53	26.28
Third Quarter .....	40.85	33.32
Fourth Quarter .....	45.03	33.60

We have not paid cash dividends on our common stock since inception, and our Board of Directors presently plans to reinvest our earnings in the business and to repurchase common shares. As of December 31, 2004, we had approximately \$1.1 billion authorized by the Board of Directors for the repurchase of our common stock. Accordingly, it is anticipated that no cash dividends will be paid to holders of common stock in the foreseeable future. As of March 4, 2005, there were 1,102 holders of record of our common stock.

Following is a summary of our stock repurchases for the quarter ended December 31, 2004. <sup>(1)</sup>

Period	Total Number of Shares Purchased <sup>(2)</sup>	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
September 26, 2004 to October 30, 2004 .....	360,000	\$ 23.98	360,000	\$ 1,089.8 million
October 31, 2004 to November 27, 2004 .....	—	—	—	\$ 1,089.8 million
November 28, 2004 to December 31, 2004 ...	—	—	—	\$ 1,089.8 million
Total .....	<u>360,000</u>	<u>\$ 23.98</u>	<u>360,000</u>	<u>\$ 1,089.8 million</u>

(1) On February 24, 2004, we announced that our Board of Directors had approved a stock repurchase plan that authorized the repurchase of up to \$500.0 million of our outstanding common stock through February 13, 2007. On September 20, 2004 we announced that our Board of Directors had authorized an additional \$1.0 billion for repurchase of our outstanding common stock through September 14, 2009. We may repurchase shares from time to time in the open market, through block trades or otherwise. The repurchases may be commenced or suspended at any time or from time to time without prior notice depending on prevailing market conditions and other factors.

(2) All shares were purchased pursuant to the publicly announced plan.

## Item 6. Selected Financial Data

Set forth below is a summary of certain consolidated financial information with respect to Novellus as of the dates and for the periods indicated. The Consolidated Statements of Operations data set forth below for the five years ended December 31, 2004 and the Consolidated Balance Sheet data at each year end for the five years ended December 31, 2004 have been derived from our Consolidated Financial Statements, which have been audited. We acquired Peter Wolters, AG, on June 28, 2004, in a transaction accounted for as a purchase business combination. The Selected Consolidated Financial Data includes the operating results and financial data of Peter Wolters AG from June 28, 2004. We acquired SpeedFam-IPEC, Inc. on December 6, 2002, in a transaction accounted for as a purchase business combination. The Selected Consolidated Financial Data includes the operating results and financial data of SpeedFam-IPEC from December 6, 2002.

### Selected Consolidated Financial Data

	Years Ended December 31,				
	2004	2003	2002	2001	2000 <sup>(8)</sup>
	(in thousands, except per share data)				
<b>Consolidated Statements of Operations Data:</b>					
Net sales .....	\$ 1,357,288	\$ 925,070	\$ 839,958	\$ 1,339,322	\$ 1,319,486
Gross profit .....	665,130 <sup>(1)</sup>	380,000 <sup>(4)</sup>	378,523	691,351	730,893
Income (loss) before cumulative effect of change in accounting principle ...	156,690	(5,034)	22,920	144,470	239,168
Cumulative effect of change in accounting principle .....	—	(62,780) <sup>(3)</sup>	—	—	(89,788)
Net income (loss) .....	\$ 156,690 <sup>(2)</sup>	\$ (67,814) <sup>(4)</sup>	\$ 22,920 <sup>(5,6)</sup>	\$ 144,470 <sup>(5,7)</sup>	\$ 149,380
Per common share:					
Income (loss) before cumulative effect of change in accounting principle ...					
Basic .....	\$ 1.07	\$ (0.03)	\$ 0.16	\$ 1.01	\$ 1.76
Diluted .....	\$ 1.06	\$ (0.03)	\$ 0.15	\$ 0.97	\$ 1.66
Cumulative effect of change in accounting principle, net of tax					
Basic .....	—	\$ (0.42)	—	—	\$ (0.66)
Diluted .....	—	\$ (0.42)	—	—	\$ (0.62)
Net income (loss)					
Basic .....	\$ 1.07	\$ (0.45)	\$ 0.16	\$ 1.01	\$ 1.10
Diluted .....	\$ 1.06	\$ (0.45)	\$ 0.15	\$ 0.97	\$ 1.04
Shares used in basic per share calculations .....	145,956	150,680	144,371	142,462	135,728
Shares used in diluted per share calculations .....	147,937	150,680	148,748	148,924	143,654
<b>December 31,</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and short-term investments .....	\$ 587,762	\$ 1,006,013	\$ 1,019,652	\$ 921,822	\$ 1,219,664
Working capital .....	1,045,294	1,350,906	1,252,324	1,395,902	1,410,836
Total assets .....	2,401,832	2,338,900	2,493,994	3,031,124	2,205,474
Long-term debt obligations .....	161,103	—	—	—	—
Shareholders' equity .....	1,861,834	2,071,860	2,055,688	1,871,994	1,641,475

- (1) We recorded a credit to cost of sales of approximately \$9.0 million related to the sale of inventories previously written down.
- (2) We recorded net restructuring and other charges of \$1.5 million, acquired in-process research and development write-offs of \$6.1 million, net recovery from legal settlements of \$2.6 million and the reversal of previously accrued royalty payments of \$8.1 million.

- (3) As a result of the early adoption of Financial Accounting Standards Board Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51," we recorded a non-cash charge of \$62.8 million, net of tax, for the year ended December 31, 2003, as a cumulative effect of a change in accounting principle from the consolidation of properties previously accounted for as synthetic leases.
- (4) We recorded \$59.8 million of pre-tax charges for the year ended December 31, 2003 as a result of a restructuring plan to align our cost structure with business conditions. The charges consisted of an inventory write-down of \$44.0 million (included in gross profit), asset write-offs of \$7.9 million, facilities charges of \$4.1 million, and severance of \$3.8 million. In addition, we recorded a charge for litigation settlements of \$2.7 million.
- (5) We adopted Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets," or SFAS No. 142, in the first quarter of 2002. As a result of its adoption, we no longer amortize goodwill, which resulted in an increase in net income of \$3.6 million for the year ended December 31, 2002. Retroactive application of SFAS No. 142 would have resulted in an increase in net income for the year ended December 31, 2001 of \$3.5 million, or \$0.02 per diluted share. Amortization of goodwill was not material in years shown prior to 2001.
- (6) We recorded \$32.5 million of pre-tax charges for the year ended December 31, 2002 associated with restructuring and severance activities of \$6.5 million, write-off of debt issuance costs of \$17.0 million, and an acquired in-process research and development charge relating to the acquisition of SpeedFam-IPEC of \$9.0 million. Additionally, we recorded a pre-tax benefit of \$12.3 million for the year ended December 31, 2002 associated with the recovery of a previously written off receivable of \$7.7 million and a gain on the sale of an equity investment of \$4.6 million.
- (7) We recorded \$84.5 million of pre-tax charges for the year ended December 31, 2001. These charges include \$55.0 million related to restructuring and asset impairment, \$13.2 million of costs related to the GaSonics International Corporation acquisition, \$8.6 million for an other than temporary decline in the value of an investment, and \$7.7 million of a bad debt write-off.
- (8) We recorded a non-cash charge of \$89.8 million, after reduction for income taxes of \$48.6 million, or \$0.62 per diluted share, to reflect the cumulative effect of a change in accounting principle as of January 1, 2000 related to the adoption of the Securities and Exchange Commission Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements." Net income for the year ended December 31, 2000 also included a \$6.0 million pre-tax charge for acquired in-process research and development associated with GaSonics' acquisition of Gamma Precision Technology.

## **Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations***

### **Cautionary Note Regarding Forward-Looking Statements**

This Annual Report on Form 10-K and certain information incorporated herein by reference contain forward-looking statements within the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. All statements contained in this Annual Report on Form 10-K, other than statements that are purely historical, are forward-looking statements and are based upon management's present expectations, objectives, anticipations, plans, hopes, beliefs, intentions or strategies regarding the future. As such, forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from the results contemplated. We do not undertake, and expressly disclaim, any obligation to update this forward-looking information, except as required under applicable law.

The following information should be read in conjunction with "Part I, Item 1. Business," "Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Part II, Item 8. Consolidated Financial Statements" and the notes thereto. Forward-looking statements in this Annual Report on Form 10-K may be identified by words such as "anticipates," "estimates," "expects," "projects," "intends," "plans," "believes" or similar expressions, and include, without limitation:

- Statements about the growth of the semiconductor industry; market size, share and demand (particularly demand for corporate and consumer electronic devices); product performance; our expectations, objectives, anticipations, intentions and strategies regarding the future; expected operating results, revenues and earnings; and current and potential litigation, which statements are subject to various uncertainties,

including, without limitation, those discussed in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations — Risk Factors";

- The statements under the heading "Item 1. Business — Semiconductor Industry Background" regarding our beliefs that (1) unit demand for semiconductor devices will continue to increase; (2) there is a trend toward increasing density of the integrated circuit; (3) there is a trend toward copper conductive material and away from aluminum wiring; (4) there is trend toward low-k dielectric insulators and away from traditional silicon oxide insulating films; (5) there is a trend toward larger wafer sizes; and (6) these trends shape the equipment and process demands of our customers, which statements are subject to various risks and uncertainties, including, without limitation, periodic downturns in the semiconductor industry; slowdowns in the rate of capital investment by semiconductor manufacturers; the inaccuracy of our expectations regarding the future direction of the semiconductor industry; and our inability to develop, improve and market products that respond to industry trends;
- The statements under the heading "Item 1. Business — Semiconductor Business Strategy," concerning (1) our objective to increase our market share in the interconnect manufacturing market and strengthen our position as a leading supplier of semiconductor processing equipment; (2) our emphasis on high-productivity systems; (3) our goal to be recognized as the technology leader in each of our served available markets; (4) our focus on reducing customer costs; (5) our service differentiation philosophy; (6) our intent to broaden our interconnect offerings and become the leading supplier of interconnect manufacturing equipment; (7) our strategy to expand our market presence in, and our belief in future growth potential of, Asia; and (8) our plan to leverage our low cost manufacturing structure, which statements are subject to various risks and uncertainties, including, without limitation, difficulties implementing our growth strategy and leveraging our resources to increase market share; increased competition in our served available markets; shifts in demand from expensive, high-performance products to lower priced, conventional products, resulting in reduced profit for semiconductor manufacturers; increases in the costs of material, labor or conducting a global business, or inability to enhance our systems' productivity, which may preclude us from containing costs to customers; the current and other periodic downturns in the semiconductor industry and the global or domestic economy; political or economic instability in Asia, and fluctuations in interest and foreign currency exchange rates;
- The statements under the heading "Item 1. Business — Semiconductor Manufacturing Products" of our beliefs in the performance and effectiveness our products, including (1) that SPEED is one of the top two product offerings for the HDP CVD marketplace; (2) that Concept Three SPEED offers minimal risk to our customers in making the transition from 200mm to 300mm volume chipmaking; (3) that Concept Two Altus's pulsed nucleation layer technology has led to our market leadership position in tungsten deposition; (4) that ALTUS DirectFill lowers the overall cost of ownership by 50% or more when compared to existing products; (5) that Concept Two SEQUEL Express delivers up to 40% higher capital productivity and 40% lower cost of ownership than competing PECVD systems; (6) that VECTOR has approximately 2/3 of the footprint of the nearest competition and 33% fewer critical subsystems; (7) that the INOVA 200mm system will continue to gain market acceptance; (8) that SABRE xT is the industry's leading platform for both 200mm and 300mm wafers; (9) the increasing importance of photoresist strip and clean processes as a result of the industry's migration to copper interconnects; (10) that the GAMMA 2130 system offers a 30% higher throughput rate than the closest competitor; (11) that PEP IRIDIA offers the highest productivity of any 200mm dry-clean system currently on the market; (12) that we have an important advantage in extending copper/low-k processes to advanced semiconductor devices based on our understanding of interactions between planarization, deposition and surface preparation, which statements are subject to various risks and uncertainties, including, among others, the inaccuracy of our assessment of our products' capabilities; technical difficulties which preclude our products from performing as expected; competitors' greater financial, marketing, technical, customer service or other resources, broader product lines, and larger and more established sales organizations and customer bases; future competition from new market entrants; competitors' design and performance product improvements that may offer superior price or performance features over our products; difficulties integrating, developing and commercializing SpeedFam-IPEC CMP systems; and difficulties in selecting, developing, manufacturing and marketing our new products or enhancing our existing products;

- The statements under the heading “Item 1. Business — Marketing, Sales and Service” of our beliefs that our strategy of supporting our installed base through customer support and R&D groups has accelerated penetration of certain key accounts and our marketing efforts are enhanced by the technical expertise of our R&D personnel, which statements are subject to certain risks and uncertainties, including, without limitation, that during periods of rapid growth, we may not be able to hire, assimilate and retain a sufficient number of qualified people;
- The statement under the heading “Item 1. Business — Customers” regarding our expectation that sales of our products to relatively few customers will continue to account for a high percentage of our sales, which statement is subject to various risks and uncertainties, including without limitation, a future decrease in demand from these customers or the adoption of competing products by these customers;
- The statement under the heading “Item 1. Business — Research and Development” regarding our belief that research and development expenditures will continue to represent a substantial percentage of sales, which statement is subject to certain risks and uncertainties, including, among others, that we may be unable to allocate substantial resources to research and development;
- The statements under the heading “Item 1. Business — Manufacturing” regarding (1) our belief that our outsourcing strategy enables us to minimize our fixed costs and capital expenditures while also providing the flexibility to increase capacity as needed and allows us to focus on product differentiation through system design and quality control; (2) our belief that the use of manufacturing specialists for our subsystems incorporate the most advanced technologies in robotics, gas panels and microcomputers; (3) our goal to work with suppliers to achieve mutual cost reduction through joint design efforts; and (4) our goal of reduced dependence on limited suppliers for certain key parts, which statements are subject to various risks and uncertainties, including, without limitation, the possible occurrence of a disruption or termination of certain limited source suppliers; a prolonged inability to obtain certain components imperative to our operations; our failure to work efficiently with suppliers; and our inability to establish relationships with alternative suppliers of key parts;
- The statement under the heading “Item 1. Business — Competition” regarding our belief as to our ability to compete favorably in our market segments, which statement is subject to various risks and uncertainties, including, among others, the greater financial, marketing, technical or other resources, broader product lines, greater customer service capabilities and larger and more established sales organizations and customer bases that some of our competitors possess; future competition from new market entrants from overseas and domestic sources; our competitors’ improvement of the design and performance of their products that may offer superior price or performance features as compared to our products; and our success in selecting, developing, manufacturing and marketing our new products or enhancing our existing products;
- The statements under the heading “Item 1. Business — Patents and Proprietary Rights” regarding our intentions (1) to pursue the legal protection of our technology primarily through patent and trade secret protection; (2) to file additional patent applications; (3) to vigorously protect our intellectual property rights; and our beliefs (4) that the outcomes of current litigation will not have a material impact on our business, financial condition or results of operations; and (5) that in the future, litigation may be necessary to enforce patents issued to us, to protect trade secrets or know-how owned by us or to defend us against claimed infringement of the rights of others and to determine the scope and validity of the proprietary rights of others, which statements are subject to various risks and uncertainties, including, without limitation, the absence of assurance that patents will be issued from any of our pending applications or that any claims allowed from existing or pending patents will be sufficiently broad to protect our technology; the fact that litigation could result in substantial cost and diversion of our effort and the fact that adverse litigation determinations could result in a loss of our proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses from third parties or prevent us from manufacturing or selling our products;
- The statements under the heading “Item 1. Business — Employees” that our future success depends upon (1) our ability to recruit and retain engineers and technicians, marketing, sales, service and other key personnel and (2) the retention of a limited number of key employees and other members of our senior management, which statements are subject to various risks and uncertainties, including, among others, our inability to successfully retain or recruit key personnel and effectively manage growth;

- The statement under the heading “Item 1. Business — Environmental Matters” that federal, state and local provisions regulating discharge of materials into the environment and remedial agreements or other environmental actions are not expected to have a material effect on our capital expenditures, financial condition, results of operations or competitive position, which statement is subject to certain risks and uncertainties, including, among others, that we have inaccurately assessed the environmental impact of our activities or the compliance requirements of environmental provisions and agreements;
- The statement under the heading “Item 2. Properties” of our belief that our current properties will be sufficient to meet our requirements for the foreseeable future, which statement is subject to various risks and uncertainties, due to, without limitation, growth in our business placing unexpected strains on our resources and properties and international expansion beyond the capacities of our current properties;
- The statements under the headings “Item 3. Legal Proceedings” of our belief that the ultimate disposition of the Plasma Physics Corporation, Solar Physics Corporation, Linear Technology Corporation and other litigation matters will not have a material adverse effect on the impact on our business, financial condition, or results of operations, which statements are subject to various risks and uncertainties, including, without limitation, inherent uncertainty surrounding the litigation process and our inability to accurately predict the determination of complex issues of fact and law;
- The statements under the heading “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Results of Operations” of our strategies, beliefs, plans, expectations, anticipations and hopes with respect to Net Sales, Research and Development, Acquired In-Process Research and Development, Legal Settlement, Restructuring and Other Charges, and Income Taxes including, without limitation, (1) our plan to expand our market presence in Asia; (2) our plan to continue our R&D commitment to improvement of new products and enhancement of our current product lines; (3) our belief that significant investment in R&D is required to remain competitive; (4) our belief regarding an estimated cost savings of approximately \$10.0 million in 2005 resulting from the previously implemented restructuring plan; (5) management’s beliefs regarding the realization due to anticipated future taxable income of the benefits of the net operating loss and tax credit carryforwards; (6) management’s beliefs regarding the realization of deferred tax assets; (7) management’s expectation that our effective tax rate in 2005 will increase as a result of a reduction in our valuation allowance benefit; (8) management’s belief that adequate accruals have been provided for any potential adjustments that may result from examinations by local and foreign taxing authorities; and (9) management’s belief that we will be able to complete our evaluation of the effects of the repatriation provision within the American Jobs Creation Act of 2004 by the third or fourth quarter of fiscal 2005, which statements are subject to numerous risks and uncertainties, including, without limitation, risks and uncertainties associated with international operations, including economic downturns, trade balance issues, political instability, banking issues, fluctuations in interest and foreign currency exchange rates in Asia; our inability to allocate substantial resources to R&D programs; the inaccuracy of our estimates regarding restructuring-related cost savings; inability to realize or maximize cost savings from our restructuring; the inaccuracy of our beliefs regarding taxes; unanticipated changes in tax regulations; the impact of certain accounting standards and our synthetic leases; and our inability to accurately evaluate or effectively implement repatriation provisions;
- The statements under the heading “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies” regarding the calculation of allowances, reserves, and other estimates that are based on historical experience, and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources, and the significant judgments of management that underlie the preparation of our consolidated financial statements with respect to Revenue Recognition, Inventory Valuation, Goodwill and Other Intangible Assets, Deferred Tax Assets, Warranty Obligations, Restructuring and Impairment Charges, Foreign Currency Accounting, and Foreign Exchange Contracts including, without limitation, (1) that the majority of deferred tax assets will be realized due to anticipated future income; (2) that possible revisions to estimated warranty liability could have a positive or negative impact on gross profit; and (3) that our forward foreign exchange contracts do not subject us to speculative risk, which statements are subject to certain risks and uncertainties, including, among



others, the inaccuracy of our calculations, estimates, assumptions and judgments, regarding critical accounting policies; that actual and future product failure rates, material usage, installation costs, customer reserves or other estimates may differ from our historical experience, requiring revisions to our estimated doubtful account allowances, additional inventory write-downs, restructuring charges, litigation, warranty, and other reserves; the insufficiency of anticipated future income, whether due to a downturn in the semiconductor industry or increases in expenses; and the accuracy of our estimates and beliefs regarding warranty liability and foreign exchange contracts;

- The statement in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources” of our expectation that our current cash position, cash generated through operations and equity offerings, and available borrowings will be sufficient to meet our needs through at least the next twelve months, which statement is subject to numerous risks and uncertainties, including, without limitation, inability to timely and effectively develop, manufacture and market our new products, or enhance our existing products, a downturn in our sales or defaults on payments by customers, which may adversely affect our cash flow;
- The statements in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Off-Balance Sheet Arrangements” that we will not be required to pay any amounts under standby letters of credit arrangements or guarantee arrangements on behalf of our consolidated subsidiaries, which statement is subject to certain risks and uncertainties, including, without limitation, the inaccuracy of our assessment of our obligations under credit and guarantee arrangements;
- The statement in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Purchase Commitments” that we made adequate provision for potential exposure related to inventory on order which may go unused, which statement is subject to certain risks and uncertainties, including, without limitation, an unanticipated decline in demand that would increase our inventory-related exposure;
- The statements in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Recent Accounting Pronouncements” regarding impact upon our results of operation and financial position as a result of adopting SFAS No. 151, SFAS No. 153 and SFAS No. 123(R), which statements are subject to various risks, due to the uncertainty of the impact of certain accounting standards and the level of share-based payments granted in the future;
- The statement under the heading “Item 7A. Quantitative and Qualitative Disclosures About Market Risk — Interest Rate Risk” that we believe that an immediate change to interest rates to variable short-term borrowings will not have a material effect on our results, which statements are subject to certain risks and uncertainties, including, without limitation, that we have inaccurately assessed our future borrowing needs;
- The statement under the heading “Item 7A. Quantitative and Qualitative Disclosures About Market Risk — Foreign Currency Risk” that we do not anticipate using options to hedge anticipated and uncommitted transactions to minimize the impact of foreign currency fluctuations on our results of operations, which statements are subject to certain risks and uncertainties, including, without limitation, unanticipated fluctuations in interest and foreign currency exchange rates;
- The statements in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 2. Significant Accounting Policies — Stock Based Compensation” regarding our belief that the effects of applying SFAS No. 123(R) on pro forma disclosures are not likely to be representative of the effects on pro forma disclosures of future periods, which statement is subject to certain risks and uncertainties, including, without limitation, inherent variability underlying the judgments and estimates used to account for share-based compensation;
- The statements in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 2. Significant Accounting Policies — Forward Foreign Exchange Contracts” regarding our belief that there is not a significant risk of nonperformance by counterparties on foreign exchange contracts, which statement is subject to certain risks and uncertainties, including, without limitation, our failure to continuously monitor or accurately evaluate our positions and the credit ratings of counterparties;

- Our statement in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 3. Financial Instruments” that management intends to liquidate short-term investment to fund operations within the next twelve months, which statement is subject to certain risks and uncertainties, including, without limitation, that we have inadequately assessed the liquidity value of our short-term investments and our ability to take advantage of interest rate re-set periods;
- Our statement in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 6. Goodwill and Other Intangible Assets” of our future estimated amortization expense for the identifiable intangible assets, which statement is subject to certain risks and uncertainties, including, without limitation, the accuracy of our accounting judgments and estimates underlying the amortization expense amount;
- Our statement in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 7. Business Combination” that the escrow amount held pursuant to the acquisition of Peter Wolters AG will be released to its former shareholders, which statement is subject to certain risks and uncertainties, relating to, without limitation, the possibility of claims for pre-acquisition contingencies made against the escrow and the viability of those claims;
- Our statement in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 9. Restructuring and Other Charges” that we do not expect to recover the carrying value of abandoned R&D assets through future cash flows, which statement is subject to certain risks and uncertainties, including, without limitation, that abandoned technology will have some future economic benefit; and
- Our statement in “Item 8. Financial Statements and Supplementary Data — Notes to Consolidated Financial Statements — Note 10. Long-term Debt” that as of December 31, 2004 we have an aggregate amount of \$10.7 million available for future borrowing, which statement is subject to certain risks and uncertainties, including, without limitation, an inaccurate assessment of available borrowed funds or future needs for funds, and the continued viability of our long-term borrowing arrangements.

## **Introduction**

The following Management’s Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is intended to provide readers with an understanding of the Company. Our MD&A addresses the following topics:

- Overview of Our Business and Industry;
- Results of Operations;
- Critical Accounting Policies;
- Liquidity and Capital Resources;
- Off-balance Sheet Arrangements;
- Contractual Obligations;
- Related Parties;
- Recent Accounting Pronouncements;
- Forward-Looking Statements; and
- Risk Factors.

## **Overview of Our Business and Industry**

Novellus Systems, Inc., a California corporation organized in 1984, develops, manufactures, sells and supports equipment used in the fabrication of integrated circuits, commonly called microchips. The customers for these products are semiconductor manufacturers who produce chips for sale or for incorporation in their own products, or who provide chip manufacturing services to third parties.

In 2001, Novellus expanded beyond deposition technologies into the area of wafer surface preparation when we acquired GaSonic International Corporation, a manufacturer of systems used to clean and prepare a wafer surface after the manufacturing steps that precede deposition. In 2002, we acquired SpeedFam-IPEC, Inc., a manufacturer of chemical mechanical planarization (CMP) products. In 2004, we further diversified by acquiring Peter Wolters AG, a 200-year-old German company specializing in lapping and polishing equipment for a number of different industries. With the acquisition of Peter Wolters, Novellus entered into market sectors beyond semiconductor manufacturing for the first time. In December 2004, the Company approved the creation of Novellus Development Company LLC, with funding of up to \$10 million, for investment in private companies at various stages of development.

Our business depends on capital expenditures made by chip manufacturers, who in turn are dependent on corporate and consumer demand for chips and the devices which use them. Since the industry in which we operate is driven by spending for electronic products, our business is directly affected by growth or contraction in the global economy as well as by the adoption of new technologies. Demand for personal computers, the expansion of the Internet and telecommunications industries, and the emergence of new applications in consumer electronics have a direct impact on our business. In addition, the industry is characterized by intense competition and rapidly changing technology. We continue to work closely with our customers and make substantial investments in research and development in order to continue delivering innovative products which enhance productivity for our customers and utilize the latest technology. We believe these investments have positioned us for future growth.

We focus on certain key quarterly financial data to manage our business. Net sales, gross profit, net income (loss) and net income (loss) per share are the primary measures we use to monitor performance, although we also use certain non-GAAP measures such as net orders to assess business trends and performance. Net orders are also used to forecast and plan future operations. Net orders consist of current period orders less current period cancellations. The following table sets forth certain quarterly and annual financial information for the periods indicated:

	Quarterly Financial Data				Year Ended December 31,
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
<b>2004:</b>					
Net sales .....	\$ 262,862	\$ 338,219	\$ 415,935	\$ 340,272	\$ 1,357,288
Gross profit .....	\$ 124,605	\$ 169,680	\$ 201,111	\$ 169,734	\$ 665,130
Net income .....	\$ 16,681	\$ 37,811	\$ 64,662	\$ 37,536	\$ 156,690
Diluted net income per share .....	\$ 0.11	\$ 0.25	\$ 0.45	\$ 0.27	\$ 1.06
Net orders .....	\$ 346,793	\$ 397,598	\$ 422,692	\$ 331,347	\$ 1,498,430
<b>2003:</b>					
Net sales .....	\$ 238,410	\$ 239,050	\$ 221,099	\$ 226,511	\$ 925,070
Gross profit .....	\$ 109,814	\$ 105,322	\$ 58,776	\$ 106,088	\$ 380,000
Net income (loss) .....	\$ 11,872	\$ 7,430	\$ (97,568)	\$ 10,452	\$ (67,814)
Diluted net income (loss) per share .....	\$ 0.08	\$ 0.05	\$ (0.64)	\$ 0.07	\$ (0.45)
Net orders .....	\$ 241,825	\$ 198,759	\$ 220,775	\$ 275,219	\$ 936,578
<b>2002:</b>					
Net sales .....	\$ 169,679	\$ 222,147	\$ 230,495	\$ 217,637	\$ 839,958
Gross profit .....	\$ 71,530	\$ 101,564	\$ 109,382	\$ 96,047	\$ 378,523
Net income .....	\$ 3,836	\$ 12,013	\$ 4,083	\$ 2,988	\$ 22,920
Diluted net income per share .....	\$ 0.03	\$ 0.08	\$ 0.03	\$ 0.02	\$ 0.15
Net orders .....	\$ 170,304	\$ 275,888	\$ 202,409	\$ 219,434	\$ 868,035

The semiconductor equipment industry is subject to cyclical conditions which play a major role in demand, as defined by net orders. These fluctuations, in turn, affected our net sales over the past three years. In 2004, we experienced a significant increase in demand for our products. Net orders increased by \$561.9 million or 60% from 2003 to 2004. The increase in demand began in the fourth quarter of 2003, when net orders increased 25% sequentially, and continued into 2004. In the first three quarters of 2004, we experienced sequential increases in

net orders of 26%, 15%, and 6%, respectively. The net order growth in 2004 was driven primarily by strengthening demand for corporate and consumer electronic devices, which resulted in an increase in our customers' capacity utilization. In addition, we experienced increased demand as a result of our customers' transition to 300mm fabrication equipment. In the fourth quarter of 2004, demand began to slow and we experienced a 22% decrease in net orders.

In 2003, we experienced a modest increase in net orders from 2002. Net orders during the first three quarters of 2003 were sequentially volatile with a 10% increase in the first quarter, an 18% decrease in the second quarter, and an 11% increase in the third quarter, reflecting uncertainty in the demand for semiconductor devices. Demand increased in the fourth quarter of 2003.

The receipt of net orders in a particular quarter affects revenue in subsequent quarters. Net orders turn to revenue either at shipment or upon customer acceptance of the equipment. Our revenue recognition policy addresses the distinction between revenue recognized upon shipment and revenue recognized upon customer acceptance. Equipment generally ships within two to six months of receiving the related order and if applicable, customer acceptance is typically received one to six months after shipment. These time lines are general estimates and actual times may vary depending on specific customer circumstances. We do not report orders for systems with delivery dates greater than twelve months after receipt of the order.

Demand for our systems can vary significantly from period to period as a result of several factors, including, but not limited to, downturns in the economy and semiconductor industry, supply of and demand for semiconductor devices, and competition in the semiconductor industry among suppliers of similar products. For these and other reasons, our results of operations for fiscal years 2004, 2003 and 2002 may not necessarily be indicative of future operating results.

## Results of Operations

(dollars in thousands, except per share amount)

### Net Sales

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Net Sales .....	\$ 1,357,288	\$ 925,070	\$ 839,958	47%	10%

The increase in net sales of \$432.2 million, or 47%, from 2003 to 2004 was primarily due to improved market conditions during 2004, driven mainly by increased volume. The increase in volume was a result of increased capital spending by our customers as demand for semiconductor devices increased. The increase in net sales of \$85.1 million, or 10%, from 2002 to 2003 was primarily due to slightly improved market conditions during 2003, driven mainly by increased volume. The increase in volume was a result of a moderate increase in capital spending by our customers as demand for semiconductor devices increased.

Geographical net sales as a percentage of total net sales were as follows (based on the location of the customers' facilities):

	Years Ended December 31,		
	2004	2003	2002
North America .....	23%	35%	39%
Europe .....	9%	10%	7%
Asia .....	68%	55%	54%

The increase in international net sales (sales outside North America) as a percentage of net sales for the current year over the prior year is due to an increase in net sales in the Asia region. We consider the Asia region to consist of Korea, Japan, Singapore, China and Taiwan. A significant portion of our net sales is generated in Asia, primarily because a substantial portion of the world's semiconductor manufacturing capacity is located there. We plan to continue to focus on expanding our market presence in Asia, as we believe that significant additional growth potential exists in this region over the long term.

The increase in net sales in Europe and Asia as a percentage of total net sales during 2003 was attributable to higher demand.

### *Gross Profit*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Gross profit .....	\$ 665,130	\$ 380,000	\$ 378,523	75%	Less than 1%
% of net sales .....	49%	41%	45%		

The increase in gross profit as a percentage of net sales in 2004 compared to 2003 is due primarily to a \$44.0 million write-down of inventory in 2003, a favorable product mix and increased absorption of our fixed overhead costs from higher shipment levels. Sales of inventory previously written down resulted in a credit to cost of sales of approximately \$9.0 million for the year ended December 31, 2004. In the comparable prior-year periods, sales of previously reserved inventory did not have a material effect on the margin in absolute dollars or as a percentage of net sales.

The decline in gross profit as a percentage of net sales in 2003 compared to 2002 was due primarily to a \$44.0 million write-down of inventory in 2003. In the third quarter of 2003, we experienced a shift in our customers' order patterns from 200mm to 300mm equipment, which resulted in reduced demand for our 200mm equipment. Furthermore, the levels of required spares inventory were reduced due to a streamlining of our worldwide spares distribution system. These changes resulted in a portion of our inventory becoming excess or obsolete and led to a \$44.0 million write-down of inventory. The weakness in demand for semiconductor capital equipment negatively affected our gross margin as we experienced low absorption of our fixed overhead costs.

Our gross profit from period to period is affected by the treatment of certain product sales in accordance with Securities and Exchange Commission Staff Accounting Bulletin (SAB) No. 104, "Revenue Recognition," or SAB 104, which superseded the earlier related guidance in SAB No. 101, "Revenue Recognition in Financial Statements," or SAB 101. For these sales, we recognize all of a product's cost upon shipment even though a portion of a product's revenue may be deferred until final payment is due, typically upon customer acceptance.

### *Selling, General and Administrative (SG&A)*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
SG&A .....	\$ 194,652	\$ 165,618	\$ 154,172	18%	7%
% of net sales .....	14%	18%	18%		

SG&A expense includes compensation and benefits for corporate, financial, marketing, and administrative personnel as well as travel expenses and professional and legal fees. Also included are expenses for rents, utilities, and depreciation and amortization related to the assets utilized by these functions.

The increase in SG&A expense in 2004, in absolute dollars, is primarily due to costs in the operations of Peter Wolters AG, which we acquired on June 28, 2004, as well as higher selling costs, profit sharing and employee-related expenses. The increase in selling costs, profit sharing and employee-related expenses is due to an increase in business volume. This increase was partially offset by a credit to SG&A of \$8.1 million for the reversal of previously accrued royalty payments in connection with our legal settlement with Applied Materials, Inc. The decrease in SG&A expense as a percentage of net sales is due to an increase in net sales.

The increase in absolute dollars in 2003 was primarily due to higher salaries and litigation costs, the expense resulting from the operations of SpeedFam-IPEC for the full year, and increased depreciation expense as a result of our early adoption of FIN 46 and subsequent purchase of properties previously accounted for as synthetic leases during the third quarter of 2003. As a percentage of net sales, SG&A expense in 2003 was consistent with 2002.

### **Research and Development (R&D)**

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Research and development .....	\$ 252,083	\$ 227,439	\$ 222,344	11%	2%
% of net sales .....	19%	25%	26%		

R&D expense includes compensation and benefits for our research and development personnel, project materials, chemicals and other direct expenses incurred in product and technology development. Also included are expenses for equipment repairs and maintenance, rents, utilities and depreciation. Our significant investments in R&D over the past several years reflect our strong commitment to the continuous improvement of our current product lines and the development of new products and technologies. We continue to believe that significant investment in R&D is required to remain competitive, and we plan to continue to invest in new products and enhancement of our current product lines.

The increase in R&D expense in absolute dollars in 2004 from the prior-year period is a result of the acquisition of Peter Wolters AG, increased usage of project materials and increased profit sharing expense due to improved operating performance. R&D expense as a percentage of net sales decreased compared to the respective prior-year periods primarily due to an increase in net sales.

The increase in absolute dollars in 2003 was primarily due to additional spending related to the continuing development of CMP technologies which were acquired through the acquisition of SpeedFam-IPEC in December 2002, and higher depreciation expense as a result of our early adoption of FIN 46 and subsequent purchase of properties previously accounted for as synthetic leases during the third quarter of 2003. As a percentage of net sales, R&D expense in 2003 remained relatively flat compared to 2002.

### **Acquired In-Process Research and Development (IPR&D)**

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
IPR&D .....	\$ 6,124	\$ —	\$ 9,003	100%	(100)%
% of net sales .....	less than 1%	—	1%		

During 2004, we incurred a charge totaling \$6.1 million for acquired in-process research and development in connection with the acquisition of Angstrom Systems, Inc. We incurred no such charges during 2003. In connection with the acquisition of SpeedFam-IPEC in December 2002, we recorded a \$9.0 million charge to write-off certain acquired IPR&D in 2002.

Projects which qualify as IPR&D had not yet reached technological feasibility and had no alternative future use. Technological feasibility is defined as being equivalent to completion of a beta-phase working prototype in which there is no significant remaining risk relating to the development.

The value assigned to IPR&D was determined by considering the importance of each project to the overall development plan, estimating costs to develop the acquired IPR&D into commercially viable products, estimating the resulting net cash flows from the projects when completed and discounting the net cash flows to their present value. The revenue estimates used to value the purchased IPR&D were based on estimates of relevant market sizes and growth factors, expected trends in technology and the nature and expected timing of new product introductions.

The rates utilized to discount the net cash flows to their present value were based on a weighted-average cost of capital determined by examining market information for several comparable companies. The weighted-average cost of capital was adjusted to reflect difficulties and uncertainties in completing each project and thereby achieving technological feasibility, the percentage of completion of each project, anticipated market acceptance and penetration, market growth rates and risks related to the impact of potential changes in future target markets. Based on these factors, discount rates of 25% and 33% were deemed appropriate for valuing the IPR&D for SpeedFam-IPEC and Angstrom Systems, Inc., respectively. The estimates used in valuing IPR&D were based upon assumptions believed to be reasonable but which are inherently uncertain and unpredictable. As a result, actual results may differ materially from our estimates.

### *Legal Settlement*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Legal settlement .....	\$ 5,400	\$ 2,691	\$ —	101%	100%
% of net sales .....	less than 1%	less than 1%	—		

During 2004, we incurred a charge of \$2.9 million related to the Semitool litigation and a charge of \$2.5 million related to the settlement of a class action lawsuit by field service engineers relating to overtime compensation. In 2003, we incurred a legal settlement charge of \$2.7 million to settle certain indemnification claims. No such legal charges were incurred during the year ended December 31, 2002.

### *Restructuring and Other Charges*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Restructuring and other charges .....	\$ 1,484	\$ 15,838	\$ 6,467	(91)%	145%
% of net sales .....	less than 1%	2%	1%		

During 2004, we incurred a severance charge of \$1.2 million and asset impairments of \$1.2 million. These charges were offset by the reversal of a previously recorded restructuring accrual of \$0.9 million due to a change in future estimated sublease income related to vacated facilities.

During 2003, we incurred \$15.8 million of restructuring and other charges consisting of \$7.9 million for asset write-offs (including fixed assets and purchased technology), \$4.1 million for vacated facilities, and \$3.8 million for severance. The asset write-offs, facilities charges, and severance charges were recorded in connection with activities undertaken to align our cost structure with current business conditions.

Restructuring and other charges in 2002 consisted of \$1.5 million related to vacated facilities and \$5.0 million of severance benefits for workforce reductions.

The charge for vacated facilities relates to rent obligations after the abandonment of certain facilities currently under long-term operating lease agreements. When applicable, anticipated future sublease income related to the vacated buildings has been offset against the charge for the remaining lease payments. Additionally, certain fixed assets, including leasehold improvements, associated with the abandoned facilities that had no future economic benefit have been written off. Substantially all actions under the restructuring plans had been achieved as of December 31, 2004, except for future rent obligations of \$41.7 million, which are to be paid in cash through year 2017. For further discussion, see Note 9 to the Consolidated Financial Statements.

The restructuring plans are estimated to have reduced our expenses by approximately \$9.6 million in 2004, of which \$7.9 million relates to savings from vacated facilities and \$1.7 million relates to savings from workforce reductions. We estimate cost savings related to facilities of approximately \$10.0 million in 2005 resulting from the implemented restructuring plans. Actual savings may differ from our estimated savings.

### *Bad Debt Recovery*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Bad debt recovery .....	\$ —	\$ —	\$ (7,662)	0%	100%
% of net sales .....	—	—	(1)%		

In September 2001, an outstanding account receivable balance was at risk for collection because the customer was facing financial difficulties, payment was overdue and overall industry conditions continued to deteriorate. Accordingly, we recorded a write-off of \$7.7 million. However, in the first quarter of 2002, all amounts owed under this account receivable balance were collected, resulting in a benefit to operations of \$7.7 million.

### *Other Income, net*

	Years Ended December 31,			% Change in 2004	% Change In 2003
	2004	2003	2002		
Other income, net .....	\$ 17,804	\$ 16,266	\$ 28,721	9%	(43)%
% of net sales .....	1%	2%	3%		

Other income, net, includes interest income, interest expense and other non-operating items. The increase in interest and other income, net, in absolute dollars for 2004 compared to 2003 is primarily due to the cash receipt of \$8.0 million in connection with the settlement of the Applied Materials, Inc. litigation. This was partially offset by an increase in interest expense on long term debt of \$1.8 million from the Euro based loan used to acquire Peter Wolters AG and a decrease in interest income due to lower balances of interest-bearing cash and short-term investments and lower interest rates during 2004. Lower cash and investment balances resulted mainly from repurchases of our common stock during the year ended December 31, 2004. The exercise of our purchase options on properties previously leased under synthetic leases during the year ended December 31, 2003 reduced our interest income by \$6.0 million for the year ended December 31, 2004 as compared to the prior-year period.

The decrease in interest and other income, net, in 2003 from 2002 is attributable to lower interest income resulting from declining interest rates on interest-bearing investments and a change in accounting related to properties previously accounted for under synthetic leases. The change in synthetic lease accounting reduced our interest income by approximately \$3.0 million for the year ended December 31, 2003. In the first quarter of 2003, we also recorded a loss of \$0.6 million related to the redemption of the SpeedFam-IPEC convertible subordinated notes. The decrease also resulted from a reduction in interest income due to a decline in interest rates and a decrease in interest-bearing investments after we used \$880.0 million of restricted investments to retire our Liquid Yield Option Notes<sup>TM</sup>, or LYONS, in the third quarter of 2002. We also recorded a non-cash charge of \$17.0 million for the write-off of unamortized issuance costs related to the retirement of the LYONS in the third quarter of 2002. The decrease in other income in 2002 was partially offset by a \$4.6 million gain on the sale of an equity investment.

### *Income Taxes*

Our effective tax provision (benefit) rates were 30% in 2004, (67%) in 2003 and zero percent in 2002. Our effective tax rate in 2004 differs from 2003 as a result of increased profitability. The effective tax rate in 2004 reflects the benefits of R&D tax credits and foreign tax credits, partially offset by the impact of an in-process R&D charge taken in the second quarter. The in-process R&D charge is not deductible for income tax purposes.

Our effective tax benefit rate in 2003 was higher than in 2002 as a result of the combined benefit of the net operating loss and tax credit carryforwards. Management believes the benefits of the net operating loss and tax credit carryforwards will be realized due to anticipated future taxable income. Our future effective income tax rate depends on various factors, such as the company's profits (losses) before taxes, tax legislation, the geographic composition of pre-tax income, and non-deductible expenses incurred in connection with acquisitions.

We expect our effective tax rate in 2005 to increase as a result of a reduction in our valuation allowance benefit.

We received a notification from the Internal Revenue Service that a settlement agreement with respect to tax years through 2002 has been proposed and is pending with the Congressional Joint Committee on Taxation. In addition, certain of our foreign subsidiaries are subject to examination by the foreign taxing authorities. The timing of the settlement of these examinations is uncertain. We believe that adequate accruals have been provided for any potential adjustments that may result from these examinations.

On October 22, 2004, the American Jobs Creation Act of 2004 was enacted into law. The Act provided for a special one-time 85% dividends received deduction on certain foreign earnings repatriated, as defined in the Act. The deduction could result in an approximate 5.25% federal tax rate on repatriated foreign earnings, if we elect to apply this provision to qualifying earnings repatriation. We are in the process of evaluating the effects of utilization of the repatriation provisions pending issuance of further regulatory guidance regarding certain provisions of the Act. We believe that we will be able to complete our evaluation of the effects of the repatriation provision by the third or fourth quarter of fiscal 2005. We have previously been subject to US tax at a 35% tax rate on approximately \$44 million of foreign earnings. While we would benefit from the reduced 5.25% tax rate if we repatriate some or all of these earnings under the Act, we would also lose the ability to benefit from foreign



tax credits otherwise available with respect to such earnings. Accordingly, we are unable to estimate the net impact of the Act currently, although it is unlikely to be significant.

### **Critical Accounting Policies**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, inventory valuation, goodwill and other intangible assets, deferred tax assets, warranty obligations and restructuring and impairment charges. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the current circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our Consolidated Financial Statements.

#### ***Revenue Recognition***

We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 104, "Revenue Recognition," or SAB 104, which superseded the earlier related guidance in SAB 101. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectibility is reasonably assured.

Certain of our equipment sales are accounted for as multiple-element arrangements. A multiple-element arrangement is a transaction which may involve the delivery or performance of multiple products, services, or rights to use assets, and performance may occur at different points in time or over different periods of time. Our equipment sales generally have two elements: 1) delivery of the equipment and 2) installation of the equipment and customer acceptance. If we have met defined customer acceptance experience levels with both the customer and the specific type of equipment, we recognize revenue for the equipment element upon shipment and transfer of title, with the installation and acceptance element recognized at customer acceptance. All other equipment sales are recognized upon customer acceptance.

Installation services are not essential to the functionality of the delivered equipment. As provided for in EITF 00-21, "Revenue Arrangements with Multiple Deliverables," we allocate revenue based on the residual method as a fair value has been established for installation services. However, since final payment is not typically billable until customer acceptance, we defer revenue for the final payment until customer acceptance.

Revenue related to sales of spare parts is recognized upon shipment. Revenue related to maintenance and service contracts is recognized ratably over the duration of the contracts. Unearned maintenance and service contract revenue is included in other accrued liabilities.

#### ***Inventory Valuation***

We periodically assess the recoverability of all inventories, including raw materials, work-in-process, finished goods, and spare parts, to determine whether adjustments for impairment are required. Inventory that is obsolete or in excess of our forecasted usage is written down to its estimated realizable value based on assumptions about future demand and market conditions. If actual demand is lower than our forecast, additional inventory write-downs may be required.

#### ***Goodwill and Other Intangible Assets***

We account for goodwill and other intangible assets in accordance with Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets," or SFAS No. 142. SFAS No. 142 requires that goodwill and identifiable intangible assets with indefinite useful lives no longer be amortized, but instead be tested for impairment at least annually. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets."

We review our long-lived assets, including goodwill and other intangible assets, for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. In accordance with our policy, we completed the goodwill impairment test in the fourth quarter of 2004. The first step of the test identifies when impairment may have occurred, while the second step of the test measures the amount of the impairment, if any. The results of our impairment tests did not indicate impairment.

#### ***Deferred Tax Assets***

We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. As of December 31, 2004, we had approximately \$126.3 million of deferred tax assets, net of a valuation allowance of \$80.3 million principally related to acquired net operating loss carryforwards and foreign tax credits that are not realizable until 2007 and beyond. The valuation allowance includes \$44.0 million related to acquired deferred tax assets of SpeedFam-IPEC which will be credited to goodwill when realized and \$32.9 million related to stock option deductions which will be credited to equity when realized. Management believes the majority of deferred tax assets will be realized due to anticipated future income. We have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance. If in the future we determine that we would not be able to realize all or part of our net deferred tax assets, an increase to the valuation allowance for deferred tax assets would decrease income in the period in which such determination is made.

#### ***Warranty Obligations***

Our warranty policy generally states that we will provide warranty coverage for a predetermined amount of time on systems and modules for material and labor to repair and service the equipment. We record the estimated cost of warranty coverage to cost of sales upon system shipment. The estimated cost of warranty is determined by the warranty term, as well as the average historical labor and material costs for a specific product. Should actual product failure rates or material usage differ from our estimates, revisions to the estimated warranty liability may be required. These revisions could have a positive or negative impact on gross profit. We review the actual product failure rates and material usage rates on a quarterly basis and adjust our warranty liability as necessary.

#### ***Restructuring and Impairment Charges***

Restructuring activities initiated prior to December 31, 2002 were recorded in accordance with Emerging Issues Task Force Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)," and restructuring activities after December 31, 2002 were recorded under the provisions of SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," or SFAS No. 146; SFAS No. 112, "Employers' Accounting for Postemployment Benefits;" and SAB 100, "Restructuring and Impairment Charges." SFAS No. 146 requires that a liability for costs associated with an exit or disposal activity be recognized when the liability is incurred, rather than when the exit or disposal plan is approved.

We account for business combination restructurings under the provisions of EITF Issue No. 95-3, "Recognition of Liabilities in Connection with a Purchase Business Combination" and SAB 100. Accordingly, restructuring accruals are recorded when management initiates an exit plan that will cause us to incur costs that have no future economic benefit. Certain restructuring charges related to long-lived asset impairments are recorded in accordance with SFAS No. 144. The restructuring accrual related to vacated facilities is calculated net of estimated sublease income. Sublease income is estimated based on current market quotes for similar properties and expected occupancy dates. If we are unable to sublet these vacated properties as forecasted, if we are forced to sublet them at rates below our current estimates due to changes in market conditions, or if we change our sublease income estimate, we will adjust the restructuring accruals accordingly.

#### ***Foreign Currency Accounting***

The local currency is the functional currency for all foreign operations. Accordingly, translation gains or losses related to our foreign subsidiaries are included as a component of accumulated other comprehensive income (loss).

### ***Foreign Exchange Contracts***

We conduct portions of our business in various foreign currencies. Forward foreign exchange contracts are used to hedge against the short-term impact of foreign currency fluctuations on intercompany accounts payable denominated in U.S. dollars recorded by our Japanese subsidiary. We also enter into forward foreign exchange contracts to buy and sell foreign currencies to hedge our intercompany balances denominated in a currency other than the U.S. dollar. In 2004 and 2003, these hedging contracts were denominated primarily in the Japanese Yen, Singapore Dollar and Taiwanese Dollar. The forward foreign exchange contracts we use are generally short-term in nature. The effect of exchange rate changes on forward foreign exchange contracts is expected to offset the effect of exchange rate changes on the underlying hedged items. We believe these financial instruments do not subject us to speculative risk that would otherwise result from changes in currency exchange rates. Net foreign currency gains and losses for effective and ineffective hedges have not been material to our results of operations.

### **Liquidity and Capital Resources**

We have historically financed our operating and capital resource requirements through cash flows from operations, sales of equity securities and borrowings. Our primary source of funds as of December 31, 2004 consisted of approximately \$587.8 million of cash, cash equivalents and short-term investments. This amount represents a decrease of \$418.3 million from the December 31, 2003 balance of \$1,006.0 million. The decrease was due primarily to the repurchase of common stock for \$410.2 million and an increase in restricted cash of \$173.8 million, offset by cash generated from operations.

Net cash provided by operating activities for the year ended December 31, 2004 was \$179.2 million. The primary sources of cash from operating activities were net income, as adjusted to exclude non-cash charges and benefits, and changes in working capital accounts. The changes in working capital accounts include increases in accounts receivable of \$146.1 million, inventories of \$46.1 million, and prepaid and other current assets of \$5.7 million, offset by increases in accounts payable, accrued payroll and related expenses, accrued warranty, other accrued liabilities, income tax payable, and deferred profit of \$88.3 million.

Net cash used in investing activities in the year ended December 31, 2004 was \$333.1 million, which consisted primarily of cash paid for the acquisition of Peter Wolters AG of \$142.9 million, an increase in restricted cash and cash equivalents of \$173.8 million and capital expenditures of \$31.7 million, offset by net sales and maturities of short-term investments of \$26.6 million. As of December 31, 2004, we did not have any significant commitments to purchase property and equipment.

Net cash used in financing activities for the year ended December 31, 2004 was \$238.8 million, primarily for the repurchase of common stock for \$410.2 million, partially offset by proceeds from employee stock compensation plans of \$38.7 million and net borrowings of \$132.7 million.

Effective June 25, 2004, two of our European subsidiaries entered into a credit arrangement denominated in Euros that allowed for borrowing up to \$153.1 million. On June 28, 2004, we borrowed the entire amount available to fund the acquisition of Peter Wolters AG and for general corporate purposes. Borrowings are secured by cash or marketable securities on deposit and included within restricted cash on the consolidated balance sheet. All borrowings under the credit arrangement are due and payable on or before June 25, 2009.

On February 23, 2004, our Board of Directors renewed a stock repurchase program originally approved in September 2001. Under the repurchase program, we may repurchase up to \$500.0 million of our outstanding common stock through February 13, 2007. On September 20, 2004 we announced that our Board of Directors had authorized an additional \$1.0 billion for repurchase of our outstanding common stock through September 14, 2009.

We believe that our current cash position, cash generated through operations and equity offerings, and available borrowings will be sufficient to meet our needs through at least the next twelve months.

### **Off-Balance Sheet Arrangements**

#### ***Variable Interest Entities***

In January 2003, the Financial Accounting Standards Board, or FASB, issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51," or FIN 46. FIN 46 requires variable

interest entities to be consolidated by the primary beneficiary of the entity. An entity is considered a variable interest entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. We adopted FIN 46 on June 29, 2003.

Pursuant to the guidelines of FIN 46, we concluded that the lessor in our synthetic leases was a variable interest entity and that we were the primary beneficiary of the variable interest entity. As such, we were required to consolidate the variable interest lessor beginning on June 29, 2003. Additionally, since each of the other lessees involved with this lessor had a variable interest in specified assets and liabilities of the variable interest lessor, we were only required to consolidate the specific assets, liabilities, and operating results associated with our synthetic leases. As a result of the early adoption of FIN 46, we recorded a non-cash charge of approximately \$62.8 million, net of tax, in the third quarter of fiscal 2003 as a cumulative effect of a change in accounting principle in accordance with Accounting Principles Board Opinion No. 20, "Accounting Changes." The gross charge represents approximately \$95.8 million of pre-tax depreciation that would have been recorded had we consolidated these assets from inception of the leases. As a result of the adoption of FIN 46 and the exercise of our option to purchase the properties subject to the synthetic leases in September 2003, property and equipment increased on a net basis by approximately \$360.6 million and notes receivable and other non-current assets decreased by \$456.4 million. The purchase of these properties in September 2003 eliminated our interest in the variable interest entity.

The consolidation and subsequent purchase of the facilities previously accounted for as synthetic leases increased our depreciation expense by approximately \$8.5 million per quarter and decreased both our rent expense and interest income by approximately \$3.0 million per quarter from 2002 levels. The adoption of FIN 46 and the exercise of our purchase option had no impact on our liquidity.

#### ***Standby Letters of Credit***

We provide standby letters of credit to certain parties as required for certain transactions we initiate during the ordinary course of business. As of December 31, 2004, the maximum potential amount of future payments that we could be required to make under these letters of credit was approximately \$4.4 million. We have not recorded any liability in connection with these arrangements beyond that required to appropriately account for the underlying transaction being guaranteed. We do not believe, based on historical experience and information currently available, that it is probable that any amounts will be required to be paid under these arrangements.

#### ***Guarantee Arrangements***

We have guarantee arrangements on behalf of certain of our consolidated subsidiaries. These guarantee arrangements are for line-of-credit borrowings, overdrafts and operating leases. The available short-term credit facilities with various financial institutions total \$57.8 million, of which \$54.7 million was unutilized as of December 31, 2004. These credit facilities bear interest at various rates, expire on various dates through December 2005 and are used for general corporate purposes. As of December 31, 2004, our subsidiaries had \$3.1 million outstanding under the short-term lines of credit at a weighted-average interest rate of 5.0%.

We also have available long-term credit facilities with various institutions that total \$171.8 million, of which \$10.7 million was unutilized as of December 31, 2004. The long-term credit facilities are used to fund the acquisition of Peter Wolters AG and for general corporate purposes. These credit facilities bear interest at various rates and expire in June 2009. As of December 31, 2004, we had \$161.1 million in long-term outstanding debt.

In the event of default of the guaranteed facilities by our subsidiaries, we would be required to pay a maximum of \$48.8 million as of December 31, 2004.

In addition, we guarantee the lease arrangements of certain subsidiaries. These subsidiary leases will expire between 2005 and 2010. In the event that our subsidiaries do not make the required payments, we could be required to make payments on the leases on their behalf. The annual lease obligations under these arrangements are included in our consolidated minimum lease payments table below. As of December 31, 2004, we have not recorded any liability related to guarantees of subsidiary obligations. Based on historical experience and information currently available to us, we do not believe it is probable that any amounts will be required to be paid under these guarantee arrangements.

## Contractual Obligations

We have non-cancelable operating leases for various facilities. Rent expense was approximately \$11.0 million, \$13.1 million and \$10.4 million for the years ended December 31, 2004, 2003 and 2002, respectively, net of sublease income of \$3.7 million, \$7.9 million and \$7.4 million, respectively. Certain of the operating leases contain provisions which permit us to renew the leases at the end of their respective lease terms.

The following is a table summarizing future minimum lease payments under all non-cancelable operating leases, with initial or remaining terms in excess of one year. We had no other significant commitments as of December 31, 2004.

Years Ending December 31,							
(In thousands)							
	2005	2006	2007	2008	2009	Thereafter	Sublease Income      Net Total
Non-cancelable operating leases .....	\$ 12,626	\$ 12,231	\$ 7,220	\$ 7,081	\$ 7,222	\$ 39,543	\$ (17,509) \$ 68,414

The following is a table summarizing our contractual obligations under long-term borrowing arrangements. This table excludes amounts recorded on our balance sheet as current liabilities at December 31, 2004.

Years Ending December 31,						
(In thousands)						
	2005	2006	2007	2008	2009	Thereafter
Long-term debt obligations ....	\$ —	\$ 206	\$ 206	\$ 206	\$ 160,485	\$ —

## Purchase Commitments

We have firm purchase commitments with various suppliers to ensure the availability of components. Our minimum obligation at December 31, 2004 under these arrangements was \$45.9 million. All amounts under these arrangements are due in 2005. Actual expenditures will vary based upon the volume of the transactions and length of contractual service provided. In addition, the amounts paid under these arrangements may be less in the event that the arrangements are renegotiated or cancelled. Certain agreements provide for potential cancellation penalties. Our policy with respect to all purchase commitments is to record losses, if any, when they are probable and reasonably estimable. We have made adequate provision for potential exposure related to inventory on order which may go unused.

## Recent Accounting Pronouncements

In March 2004, the Emerging Issues Task Force (EITF) issued EITF No. 03-1, "The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments" or EITF No. 03-1. EITF No. 03-1 includes guidance for determining and recording impairment for both debt and equity securities. EITF No. 03-1 also requires additional disclosure for investments that are deemed to be temporarily impaired under the standard. In September 2004, the FASB Staff issued FASB Staff Position (FSP) EITF 03-1-1, or FSP EITF 03-1-1. Effective upon issuance, FSP EITF 03-1-1 delayed, indefinitely, certain measurement and recognition guidance contained in EITF No. 03-1. Disclosures required under EITF No. 03-1 are included within Note 2 and Note 3 of the Notes to our Consolidated Financial Statements.

In November 2004, the Financial Accounting Standards Board (FASB) issued SFAS No. 151, Inventory Costs — An Amendment of ARB No. 43, Chapter 4, which clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage). The Company is required to adopt SFAS No. 151 on January 1, 2006 and its adoption is not expected to have a significant impact on the Company's results of operations or financial position.

In December 2004, the FASB issued SFAS No. 153, Exchanges of Nonmonetary Assets, an amendment of APB Opinion No. 29. SFAS No. 153 addresses the measurement of exchanges of nonmonetary assets and redefines the scope of transactions that should be measured based on the fair value of the assets exchanged. SFAS No. 153 is effective for the Company for nonmonetary asset exchanges beginning in the third quarter of 2005. The adoption of SFAS No. 153 is not expected to have a material effect on the Company's consolidated financial position or results of operations.

On December 16, 2004, the FASB issued FASB Statement No. 123 (revised 2004), Share-Based Payment, or Statement 123(R), which is a revision of FASB Statement No. 123, "Accounting for Stock-Based Compensation". Statement 123(R) supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees." or Opinion 25, and amends FASB Statement No. 95, "Statement of Cash Flows." Generally, the approach in Statement 123(R) is similar to the approach described in the unrevised Statement 123. However, Statement 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. Statement 123(R) must be adopted no later than the beginning of our fiscal third quarter, with early adoption permitted. We expect to adopt Statement 123(R) on July 3, 2005.

As permitted by the unrevised Statement 123, we currently account for share-based payments to employees using Opinion 25's intrinsic value method, under which we generally do not record compensation cost for employee stock options. Accordingly, the adoption of Statement 123(R)'s fair value method will have a significant impact on our results of operations, although it will have no impact on our overall financial position. The impact of adoption of Statement 123(R) cannot be predicted at this time because it will depend on levels of share-based payments granted in the future. However, had we adopted Statement 123(R) in prior periods, the impact of that standard would have approximated the impact of Statement 123 as described in the disclosure of pro forma net income and earnings per share in Note 2 to our Consolidated Financial Statements. Statement 123(R) also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. While the company cannot estimate what those amounts will be in the future (because they depend on, among other things, when employees exercise stock options), the amount of operating cash flows recognized in prior periods for such excess tax deductions were zero in 2004 and 2003, and \$19.4 million in 2002.

## **Risk Factors**

Set forth below and elsewhere in this Annual Report on Form 10-K and in other documents we file with the Securities and Exchange Commission, are risks and uncertainties that could cause actual results to differ materially from the results contemplated by the forward-looking statements contained in this Annual Report on Form 10-K.

### ***Cyclical Downturns in the Semiconductor Industry***

Our business depends predominantly on the capital expenditures of semiconductor manufacturers, which in turn depend on current and anticipated market demand for integrated circuits and the products that use them. The semiconductor industry has historically been very cyclical and has experienced periodic downturns that have had a material adverse effect on the demand for semiconductor processing equipment, including equipment that we manufacture and market. The rate of changes in demand is accelerating, rendering the global semiconductor industry increasingly volatile. During periods of reduced and declining demand, we must be able to quickly and effectively align our costs with prevailing market conditions, as well as motivate and retain key employees. In particular, our inventory levels during periods of reduced demand have at times been higher than optimal, relative to the current levels of production demand. We cannot provide any assurance that we may not be required to make inventory valuation adjustments in future periods. During periods of rapid growth, we must be able to acquire and/or develop sufficient manufacturing capacity to meet customer demand, and hire and assimilate a sufficient number of qualified people. Our business may be adversely affected if we fail to respond to rapidly changing industry cycles in a timely and effective manner. After experiencing a significant increase in demand throughout the first, second and third quarters of 2004, we experienced a downturn in demand in the fourth quarter of 2004. We cannot give assurances that our net sales and operating results will not be adversely affected if the current downturn in the semiconductor industry continues, or if other downturns or slowdowns in the rate of capital investment in the semiconductor industry occur in the future.

### ***The Semiconductor Industry is Intensely Competitive and Capital-Intensive***

We face substantial competition in the industry, from both potential new market entrants as well as established competitors. Some companies may have greater financial, marketing, technical or other resources than we do, as well as broader product lines, greater customer service capabilities, or larger and more established sales organizations and customer bases. Remaining competitive in the market depends in part upon our ability to develop new and enhanced systems and to introduce them at competitive prices on a timely basis. Our customers must incur substantial expenditures to install and integrate capital equipment into their semiconductor production lines. Once a manufacturer has selected a vendor's capital equipment for a particular product line, the manufacturer is likely to continue with the selected equipment vendor for that specific application at that location. Accordingly, we may experience difficulty in selling a product to a particular customer for a significant period of time after that customer has selected a competitor's product. In addition, sales of our systems depend in significant part upon a prospective customer's decision to increase or expand manufacturing capacity — both of which typically involve a significant capital commitment. From time to time, we have experienced delays in finalizing system sales following initial system qualification. Due to these and other factors, our systems typically have a lengthy sales cycle, during which we may expend substantial funds and management effort.

### ***Rapidly Changing Technology***

We devote a significant portion of our personnel and financial resources to research and development programs, and we seek to maintain close relationships with our customers in order to remain responsive to their product needs. Our success will depend on our ability to accurately predict evolving industry standards, to develop innovative solutions and improve existing technologies, to win market acceptance of our new and advanced technologies and to manufacture our products in a timely and cost-effective manner and in a manner that addresses changing customer needs. If we do not continue to gain market acceptance for our new technologies and products, or develop and introduce improvements in a timely manner in response to changing market conditions or customer requirements, our business could be seriously harmed.

As is typical in the semiconductor capital equipment market, technological innovations have long development cycles and we have experienced delays from time to time in the introduction of, and certain technical and manufacturing difficulties with, certain of our products and product enhancements. In addition, we may experience delays and technical and manufacturing difficulties in future introductions or volume production of our new systems or enhancements. The increased costs and reduced efficiencies that may be associated with the development, manufacture, sale and support of future products or product enhancements relative to our existing products, may adversely affect our operating results.

Our success in developing, introducing and selling new and enhanced systems depends upon a variety of factors, including product selection, hiring and provide competitive incentives for highly qualified design and engineering personnel, timely and efficient completion of product design and development and implementation of manufacturing and assembly processes, product performance in the field, and effective sales and marketing. There can be no assurance that we will be successful in selecting, developing, manufacturing and marketing new products, or in enhancing our existing products. There can be no assurance that revenue from future products or product enhancements will be sufficient to recover our investments in research and development. To ensure the functionality and reliability of our future product introductions or product improvements, we incur substantial research and development costs early in development cycles, before we can confirm the technical feasibility or commercial viability of a product or product improvement. If new products have reliability or quality problems, reduced orders, or higher manufacturing costs, delays in collecting accounts receivable and additional service and warranty expenses may result. Any of these events could materially adversely affect our business, financial condition or results of operations.

### ***International Operations***

Export sales currently account for a significant portion of our net sales. This trend is expected to continue in the foreseeable future. As a result, a significant portion of our sales is subject to certain risks, including, but not limited to:

- Tariffs and other trade barriers;
- Challenges in staffing and managing foreign operations and providing prompt and effective field support to our customers outside of the United States;
- Difficulties in managing foreign distributors;
- Potentially adverse tax consequences;
- Imposition of legislation and regulations relating to the import or export of semiconductor products, either by the United States or other countries;
- Inadequate protection or enforcement of our intellectual property and other legal rights in foreign jurisdictions;
- Periodic economic downturns;
- Political instability; and
- Fluctuations in interest and foreign currency exchange rates, creating the need to enter into forward foreign exchange contracts to hedge against the short-term impact of foreign currency fluctuations, specifically yen-denominated transactions.

There can be no assurance that any of these factors or the adoption of restrictive policies will not have a material adverse effect on our business, financial condition or results of operations. In addition, each region in the global semiconductor equipment market exhibits unique market characteristics that can cause capital equipment investment patterns to vary significantly from period to period. We derive a substantial portion of our revenues from customers in Asia. Any negative economic developments or geopolitical instability in Asia could result in the cancellation or delay by Asian customers of orders for our products, which could adversely affect our business, financial condition or results of operations. Our strategy to expand our market presence in Asia will render us increasingly vulnerable to these risks.

### ***Variability of Quarterly Operating Results***

We have experienced and expect to continue experiencing significant fluctuations in our quarterly operating results. These fluctuations are due to a number of factors that include, but are not limited to:

- Building our systems according to forecast, and not using limited backlog information, which hinders our ability to plan production and inventory levels;
- Failure to receive anticipated orders in time to permit shipment during the quarter;
- Customers rescheduling or canceling shipments;
- Manufacturing difficulties;
- Customers deferring orders of our existing products due to new product announcements by us and/or our competitors;
- Competitive pricing pressures;
- Overall business conditions in the semiconductor equipment industry; and
- Variations in quarterly operating results or changes in analysts' earnings estimates which may subject the price of our common stock to wide fluctuations and possible rapid increases or decreases in a short time period.

### ***Acquisitions***

We have made — and may in the future make — acquisitions of or significant investments in businesses with complementary products, services and/or technologies. Acquisitions involve numerous risks, including, but not limited to:



- Difficulties in integrating the operations, technologies, products and personnel of acquired companies;
- Lack of synergies or the inability to realize expected synergies;
- Revenue and expense levels of acquired entities differing from those anticipated at the time of the acquisitions;
- Difficulties in managing geographically dispersed operations;
- The potential loss of key employees, customers and strategic partners of acquired companies;
- Diversion of management's attention from normal daily operations of the business; and
- The impairment of acquired intangible assets as a result of technological advancements, or worse-than-expected performance of acquired companies.

Acquisitions are inherently risky, and we cannot provide any assurance that our previous or future acquisitions will be successful. The inability to effectively manage the risks associated with previous or future acquisitions could materially and adversely affect our business, financial condition or results of operations.

### ***Diversification Strategy***

Our core business and expertise has historically been in the development, manufacture, sale and support of deposition technologies, and more recently, wafer surface preparation technologies. Our acquisition of Peter Wolters and subsequent entry into the market for high-precision machine manufacturing equipment represents the first expansion of our business beyond the semiconductor equipment industry. We lack experience in the high-precision machine manufacturing equipment market, relative to our knowledge of the semiconductor equipment industry, and cannot give any assurance that we can maintain or improve the quality of products, level of sales, or relations with customers or suppliers, that are necessary to compete in or lead the market for high-precision machine manufacturing tools. The success of the Peter Wolters business depends in part on our ability to utilize and build upon the expertise of key employees. Our efforts to integrate and develop the Peter Wolters business may divert capital, management attention, research and development and other critical resources away from, and adversely affect, our core business.

### ***Concentration of Net Sales***

We currently sell a significant proportion of our systems in any particular period to a limited number of customers, and we expect that sales of our products to relatively few customers will continue to account for a high percentage of our net sales in the foreseeable future. Although the composition of the group comprising our largest customers varies from year to year, the loss of a significant customer or any reduction in orders from any significant customer — including reductions due to customer departures from recent buying patterns, as well as economic or competitive conditions in the semiconductor industry — could adversely affect our business, financial condition or results of operations.

### ***Intellectual Property***

We intend to continue to seek legal protection, primarily through patents and trade secrets, for our proprietary technology. Seeking patent protection is a lengthy and costly process, and there can be no assurance that patents will be issued from any pending applications, or that any claims allowed from existing or pending patents will be sufficiently broad to protect our proprietary technology. There is also no guarantee that any patents we hold will not be challenged, invalidated or circumvented, or that the rights granted thereunder will provide competitive advantages to us, given the speed with which technology becomes obsolete in the semiconductor industry. Our competitors may also develop and obtain patents to technologies that are similar or superior to our technologies. In addition, the laws of foreign jurisdictions in which we develop, manufacture or sell our products may not protect our intellectual property rights to the same extent as do the laws of the United States.

We are currently involved in a number of legal disputes regarding patent and other intellectual property rights. Except as set forth in Part II: Other Information, Item 1. Legal Proceedings in this document, we are not aware of any significant claim of infringement by our products of any patent or proprietary rights of others. Adverse outcomes in current or future legal disputes could result in the loss of our proprietary rights, subject the company

to significant liabilities to third parties, require us to seek licenses from third parties, or prevent us from manufacturing or selling our products. Regardless of the merit of these legal disputes, we incur substantial costs to prosecute or defend our intellectual property rights. In addition, if the terms of settlements entered into with certain of our competitors is not observed or enforced, we may suffer further costs. Any of these circumstances could have a material adverse effect on our business, financial condition or results of operations.

Our ability to develop intellectual property depends on hiring, retaining and motivating highly qualified design and engineering staff with the knowledge and technical competence to advance our technology and productivity goals. To protect our trade secrets and proprietary information generally, we have entered into confidentiality or invention assignment agreements with our employees, as well as consultants and other parties. If these agreements are breached, our remedies may not be sufficient to cover our losses.

#### ***Supply Shortages and Outsourcing Activities***

We use numerous suppliers to obtain parts, components and sub-assemblies for the manufacture and support of our products. Although we make reasonable efforts to ensure that such parts are available from multiple suppliers, certain key parts may only be obtained from a single or limited sources. These suppliers are in some cases thinly capitalized, independent companies who derive a significant amount of their business from us and/or a small group of other companies in the semiconductor industry. We seek to reduce our dependence on this limited group of suppliers. However, disruption or termination of certain of these suppliers may occur. Such disruptions could have an adverse effect on our operations. A prolonged inability to obtain certain parts could have a material adverse effect on our business, financial condition or results of operations, and could result in our inability to meet customer demands on time. We also outsource the manufacture of major subassemblies, which enables us to focus on performing system design, assembly and testing in-house, thereby minimizing our fixed costs and capital expenditures. Although we make reasonable efforts to ensure that third party providers will perform to our standards, we cannot give any assurance that they will do so. Manufacturing disruption beyond our control may also impair our ability to manage inventory and cause delays in shipments, cancellation of orders or loss of business.

#### ***Outside Audit Firm Independence***

Our independent registered public accounting firm communicates with us at least annually regarding any relationships between the firm and Novellus that, in the firm's professional judgment, might have a bearing on the firm's independence with respect to Novellus. If our independent registered public accounting firm finds that it cannot confirm that it is independent of Novellus based on existing securities laws and registered public accounting firm independence standards, we could experience delays or otherwise fail to meet our regulatory reporting obligations.

In this regard, our independent registered public accounting firm has advised us that its affiliate offices in Japan, China and Taiwan had previously performed certain services for Novellus subsidiaries. The fees associated with these services were not substantial, although the services themselves might be characterized as "prohibited non-audit services" under existing securities laws. We, together with the Audit Committee of our Board of Directors and our independent registered public accounting firm have concluded that the performance of these services did not impair our accounting firm's independence with respect to Novellus.

#### ***Costs of Corporate Governance and Financial Reporting Compliance***

To comply with the requirements of the Sarbanes-Oxley Act of 2002, as well as new rules subsequently implemented by the SEC and adopted by Nasdaq in response to Sarbanes-Oxley, we have made changes to our financial reporting, securities disclosure and corporate governance practices. We may incur increased legal and financial compliance costs due to these new or revised rules, regulations, and listing requirements and management time and resources may be re-directed to implement our compliance initiatives. These rules may make it more difficult for us to attract and retain qualified executive officers and members of our board of directors, particularly to serve on our audit committee, as well as make it more costly to obtain liability coverage for our officers and directors.

### ***Third-Party Indemnification***

From time to time, in the normal course of business, we indemnify third parties with whom we enter into contractual relationships, including customers, lessors, and parties to other transactions with us, with respect to certain matters. We have agreed, under certain conditions, to hold these third parties harmless against specified losses, such as those arising from a breach of representations or covenants, other third party claims that our products when used for their intended purposes infringe the intellectual property rights of such other third parties or other claims made against certain parties. It is not possible to determine the maximum potential amount of liability under these indemnification obligations due to our limited history of prior indemnification claims and the unique facts and circumstances that are likely to be involved in each particular claim. Historically, payments made by us under these obligations have not been material.

### ***Changes in Accounting Standards For Stock Option Plans***

Pursuant to SFAS 123(R), we will be required to recognize, beginning in our third fiscal quarter of 2005 compensation expense in our statement of operations for the fair value of unvested employee stock options at the date of adoption, and new stock options granted to our employees after the adoption date over the related vesting periods of the stock options. The requirement to expense stock options granted to employees reduces the attractiveness of granting stock options because the expense associated with these grants may adversely affect our profitability. However, stock options remain an important employee recruitment and retention tool, and we may not be able to attract and retain key personnel if we reduce the scope of our employee stock option program following the adoption of FAS 123R. We may decide to replace our stock option programs with other compensation arrangements, but those are likely to negatively impact profitability. Our employees are critical to our ability to develop and design systems that advance our productivity and technology goals, increase our sales goals and provide support to customers. Accordingly, as a result of the requirement under SFAS 123(R) to recognize the fair value of stock options as compensation expense, beginning in the third quarter of 2005, our future profitability may be reduced.

### ***Investment Activities***

Our ability to compete in the semiconductor manufacturing industry depends on our success in developing new and enhanced technologies and integrating such technologies into our systems at competitive prices on a timely basis. To further these goals, we have formed the Novellus Development Company, a venture fund that will enable us to invest in emerging technologies and strengthen our technology portfolio for both existing and potentially new market opportunities. Although the fund intends to make enquiries reasonably necessary to make an informed decision as to the companies and technologies in which it will invest, we cannot provide any assurance as to any future return on investment. There are risks inherent in investing in start-up companies which may lack a stable management team, operating history or adequate cash flow. Also, the securities in which the fund may invest may not be registered under the Securities Act or any applicable state securities laws, and may be subject to restrictions on marketability or transferability. Given the nature of the investments that may be contemplated by the fund, there is a significant risk that it will be unable to realize its investment objectives by sale or other disposition at attractive prices within any given period of time or will otherwise be unable to complete a particular exit strategy. In particular, these risks could arise from changes in the financial condition or prospects of the properties in which investment are made, changes in national or local economic conditions, and changes in laws, regulations or fiscal policies of jurisdictions in which investments are made. Investments that may be contemplated by the fund may divert management time and attention, as well as capital, away from our core operating business. Any future losses on investments attributable to the fund may adversely impact our business, financial condition and operating results.

### ***Item 7A. Quantitative and Qualitative Disclosures about Market Risk***

#### ***Interest Rate Risk***

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio, short-term and long-term debt obligations. We do not use derivative financial instruments in our investment portfolio. We place our investments with high credit quality issuers and, by policy, limit the amount of credit exposure with any one issuer.

We mitigate default risk by investing in only the safest and highest credit quality securities and by monitoring the credit rating of investment issuers. The portfolio includes only marketable securities with active secondary or resale markets to ensure portfolio liquidity. We have no material cash flow exposure due to rate changes for cash equivalents and short-term investments.

The interest rate of the majority of our short-term and long-term obligations is floating. Therefore, our results are only affected by the interest rate changes to variable rate short-term borrowings. Due to the short-term nature of these borrowings, an immediate change to interest rates is not expected to have a material effect on our results.

The table below presents principal amounts and related weighted average interest rates by year of maturity for our investment portfolio and debt obligations and the fair value of each as of December 31, 2004 and 2003.

	Periods of Maturity						Fair Value December 31, 2004
	Less than 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total	
	(in thousands)						
Assets:							
Cash equivalents .....	\$ 106,117	\$ —	\$ —	\$ —	\$ —	\$ 106,117	\$ 106,117
Average interest rate .....	2.12%	—	—	—	—	2.12%	
Short-term investments .....	\$ 151,279	\$ 157,505	\$ 5,000	\$ 6,715	\$ 161,146	\$ 481,645	\$ 481,645
Average interest rate .....	1.99%	3.46%	2.85%	2.46%	1.77%	2.75%	
Restricted investments .....	\$ 176,708	\$ —	\$ —	\$ —	\$ —	\$ 176,708	\$ 176,708
Average interest rate .....	2.18%	—	—	—	—	2.18%	
Total investment securities ....	\$ 434,104	\$ 157,505	\$ 5,000	\$ 6,715	\$ 161,146	\$ 764,470	\$ 764,470
Average interest rate .....	2.12%	3.46%	2.85%	2.46%	1.77%	2.58%	
Liabilities:							
Short-term borrowings .....	\$ 3,103	\$ —	\$ —	\$ —	\$ —	\$ 3,103	\$ 3,103
Average interest rate .....	5.05%	—	—	—	—	5.05%	
Long-term borrowings .....	\$ —	\$ 618	\$ 160,485	\$ —	\$ —	\$ 161,103	\$ 161,103
Average interest rate .....	—	4.82%	2.35%	—	—	2.36%	

	Periods of Maturity						Fair Value December 31, 2003
	Less than 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total	
	(in thousands)						
Assets:							
Cash equivalents .....	\$ 497,178	\$ —	\$ —	\$ —	\$ —	\$ 497,178	\$ 497,178
Average interest rate .....	1.10%	—	—	—	—	1.10%	
Short-term investments .....	\$ 290,082	\$ 96,538	\$ —	\$ 11,590	\$ 110,625	\$ 508,835	\$ 508,835
Average interest rate .....	1.19%	1.72%	—	1.73%	1.61%	1.43%	
Restricted investments .....	\$ 2,861	\$ —	\$ —	\$ —	\$ —	\$ 2,861	\$ 2,861
Average interest rate .....	1.03%	—	—	—	—	1.03%	
Total investment securities ....	\$ 790,121	\$ 96,538	\$ —	\$ 11,590	\$ 110,625	\$ 1,008,874	\$ 1,008,874
Average interest rate .....	1.13%	1.72%	—	1.73%	1.61%	1.24%	
Liabilities:							
Short-term borrowings .....	\$ 13,023	\$ —	\$ —	\$ —	\$ —	\$ 13,023	\$ 13,023
Average interest rate .....	1.20%	—	—	—	—	1.20%	

The "less than 1 year" category contains \$4.7 million and \$6.7 million in mutual funds that do not have contractual maturities at December 31, 2004 and 2003, respectively.

### Foreign Currency Risk

We transact business in various foreign countries. Our primary foreign currency cash flows are in Asia and Europe. During 2004 and 2003, we utilized foreign currency forward exchange contracts to hedge foreign currency-denominated balance sheet positions. Under this program, increases or decreases in currency commitments and balance sheet positions, as translated into U.S. dollars, were primarily offset by realized gains and losses on the

hedging instruments. Upon the maturity of these contracts, we do not anticipate using options to hedge anticipated and uncommitted transactions. The goal of the hedging program is to minimize the impact of foreign currency fluctuations on our results of operations. We do not use foreign currency forward exchange contracts for speculative or trading purposes.

All of our unsettled foreign currency contracts are marked-to-market, with unrealized gains and losses included as a component of other income and expense. The following table provides information as of December 31, 2004 and 2003 about our derivative financial instruments, which are comprised of predominantly foreign currency forward exchange contracts. The information is provided in U.S. dollar equivalent amounts, as presented in our Consolidated Financial Statements. The table below presents the notional amounts (at the contract exchange rates), the weighted-average contractual foreign currency exchange rates, and the estimated fair value of those contracts.

December 31, 2004			
	Notional Amount (Buy) Sell	Average Contract Rate	Estimated Fair Value-Gain (Loss)
(In thousands, except for average contract rate)			
Foreign currency forward exchange contracts:			
Japanese yen .....	\$ 103,035	106.61	\$ (4,846)
British pound .....	(5,155)	0.52	14
Euro .....	(15,653)	0.75	34
Singapore dollar .....	(13,921)	1.64	(14)
Taiwanese dollar .....	(18,249)	31.89	(63)
Korean won .....	(2,059)	1,044.10	2
Indian Rupee .....	(1)	44.05	—
	<u>\$ 47,997</u>		<u>\$ (4,873)</u>

December 31, 2003			
	Notional Amount (Buy) Sell	Average Contract Rate	Estimated Fair Value-Gain (Loss)
(In thousands, except for average contract rate)			
Foreign currency forward exchange contracts:			
Japanese yen .....	\$ 34,991	111.56	\$ (3,026)
British pound .....	(4,346)	0.57	11
Euro .....	(8,136)	0.81	8
Singapore dollar .....	(7,410)	1.71	(4)
Taiwanese dollar .....	(10,868)	33.95	(23)
Korean won .....	(9,627)	1,193.30	38
	<u>\$ (5,396)</u>		<u>\$ (2,996)</u>

Item 8. *Financial Statements and Supplementary Data*

**NOVELLUS SYSTEMS, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(In thousands, except per share data)

	Years Ended December 31,		
	2004	2003	2002
Net sales .....	\$ 1,357,288	\$ 925,070	\$ 839,958
Cost of sales .....	692,158	545,070	461,435
Gross profit .....	665,130	380,000	378,523
Operating expenses:			
Selling, general and administrative .....	194,652	165,618	154,172
Research and development .....	252,083	227,439	222,344
Acquired in-process research and development .....	6,124	—	9,003
Legal settlements .....	5,400	2,691	—
Restructuring and other charges .....	1,484	15,838	6,467
Bad debt recovery .....	—	—	(7,662)
Total operating expenses .....	459,743	411,586	384,324
Operating income (loss), net .....	205,387	(31,586)	(5,801)
Other income (expense):			
Interest income .....	11,578	17,272	41,851
Interest expense .....	(2,133)	(909)	(1,020)
Other, net .....	8,359	(97)	(12,110)
Other income, net .....	17,804	16,266	28,721
Income (loss) before provision (benefit) for income taxes and cumulative effect of a change in accounting principle .....	223,191	(15,320)	22,920
Provision (benefit) for income taxes .....	66,501	(10,286)	—
Income (loss) before cumulative effect of a change in accounting principle .....	156,690	(5,034)	22,920
Cumulative effect of a change in accounting principle, net of tax of \$33,067 for 2003 .....	—	(62,780)	—
Net income (loss) .....	\$ 156,690	\$ (67,814)	\$ 22,920
Net income (loss) per share:			
Basic			
Income (loss) before cumulative effect of a change in accounting principle .....	\$ 1.07	\$ (0.03)	\$ 0.16
Cumulative effect of a change in accounting principle .....	—	(0.42)	—
Basic net income (loss) per share .....	\$ 1.07	\$ (0.45)	\$ 0.16
Diluted			
Income (loss) before cumulative effect of a change in accounting principle .....	\$ 1.06	\$ (0.03)	\$ 0.15
Cumulative effect of a change in accounting principle .....	—	(0.42)	—
Diluted net income (loss) per share .....	\$ 1.06	\$ (0.45)	\$ 0.15
Shares used in basic per share calculations .....	145,956	150,680	144,371
Shares used in diluted per share calculations .....	147,937	150,680	148,748

See accompanying Notes to the Consolidated Financial Statements.

**NOVELLUS SYSTEMS, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(In thousands)

	December 31,	
	2004	2003
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 106,117	\$ 497,178
Short-term investments .....	481,645	508,835
Accounts receivable, net of allowance for doubtful accounts of \$8,247 in 2004 and \$7,655 in 2003 .....	395,522	231,760
Inventories .....	261,046	199,100
Deferred tax assets, net .....	110,644	126,901
Prepaid and other current assets .....	14,350	8,214
Total current assets .....	1,369,324	1,571,988
Property and equipment, net .....	476,492	506,567
Restricted cash and cash equivalents .....	176,708	2,861
Goodwill .....	278,972	173,267
Intangible and other assets .....	100,336	84,217
Total assets .....	<u>\$ 2,401,832</u>	<u>\$ 2,338,900</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable .....	\$ 70,446	\$ 53,537
Accrued payroll and related expenses .....	64,531	25,197
Accrued warranty .....	45,526	28,805
Other accrued liabilities .....	54,517	43,406
Income taxes payable .....	14,691	10,293
Deferred profit .....	71,216	46,821
Current obligations under lines of credit .....	3,103	13,023
Total current liabilities .....	324,030	221,082
Long-term debt .....	161,103	—
Other non-current liabilities .....	54,865	45,958
Total liabilities .....	539,998	267,040
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, no par value; authorized shares — 10,000; issued and outstanding shares — none .....	—	—
Common stock, no par value; authorized shares — 240,000; issued and outstanding shares — 140,306 in 2004 and 152,899 in 2003 .....	1,473,829	1,574,239
Deferred stock compensation .....	(17,159)	(8,313)
Retained earnings .....	399,919	501,362
Accumulated other comprehensive income .....	5,245	4,572
Total shareholders' equity .....	1,861,834	2,071,860
Total liabilities and shareholders' equity .....	<u>\$ 2,401,832</u>	<u>\$ 2,338,900</u>

See accompanying Notes to the Consolidated Financial Statements.

**NOVELLUS SYSTEMS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands)

	Years Ended December 31,		
	2004	2003	2002
<b>Cash flows from operating activities:</b>			
Net income (loss) .....	\$ 156,690	\$ (67,814)	\$ 22,920
Adjustment to reconcile net income (loss) to net cash provided by operating activities:			
Write-off of debt issuance costs .....	—	616	17,047
Gain on sale of equity investments .....	(303)	—	(4,602)
Cumulative effect of a change in accounting principle .....	—	62,780	—
Non-cash portion of restructuring and legal settlement .....	(7,779)	51,895	—
Loss on disposal of fixed assets .....	1,650	—	—
Bad debt recovery .....	—	—	(7,662)
Depreciation and amortization .....	89,244	69,570	44,310
Amortization of deferred compensation .....	4,093	3,329	1,626
Acquired in-process research and development .....	6,124	—	9,003
Income tax benefits from employee stock plans .....	—	—	19,427
Changes in operating assets and liabilities:			
Accounts receivable .....	(146,073)	(32,562)	59,064
Inventories .....	(46,072)	5,299	19,972
Deferred income taxes .....	39,025	(14,550)	3,347
Prepaid and other current assets .....	(5,703)	22,586	44,080
Accounts payable .....	10,916	(18,064)	(4,107)
Accrued payroll and related expenses .....	31,350	(11,817)	(2,826)
Accrued warranty .....	14,718	(2,197)	(13,599)
Other accrued liabilities .....	3,415	(14,128)	(12,316)
Income taxes payable .....	3,747	(3,675)	6,113
Deferred profit .....	24,160	(8,792)	14,778
Net cash provided by operating activities .....	<u>179,202</u>	<u>42,476</u>	<u>216,575</u>
<b>Cash flows from investing activities:</b>			
Purchases of short-term investments .....	(849,558)	(841,173)	(1,876,387)
Proceeds from sales of short-term investments .....	629,378	96,493	20,807
Proceeds from maturities of short-term investments .....	246,799	640,776	2,782,771
Capital expenditures .....	(31,732)	(31,685)	(27,134)
Decrease (increase) in restricted cash and cash equivalents .....	(173,847)	2,861	—
Decrease (increase) in intangible and other assets .....	(11,226)	2,858	9,407
Increase in synthetic lease collateral .....	—	—	(177,458)
Cash acquired from SpeedFam-IPEC acquisition, net .....	—	—	43,462
Purchase of Peter Wolters AG, net of cash acquired .....	<u>(142,916)</u>	<u>—</u>	<u>—</u>
Net cash provided by (used in) investing activities .....	<u>(333,102)</u>	<u>(129,870)</u>	<u>775,468</u>

See accompanying Notes to the Consolidated Financial Statements.



**NOVELLUS SYSTEMS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)**  
(In thousands)

	Years Ended December 31,		
	2004	2003	2002
<b>Cash flows from financing activities:</b>			
Repayments of convertible subordinated debentures .....	—	(117,053)	(879,750)
Proceeds from employee stock compensation plans .....	38,706	75,651	54,434
Proceeds (repayments) from lines of credit, net .....	(10,044)	10,224	(23,380)
Proceeds from long-term debt.....	153,115	—	—
Payment on long-term debt .....	(10,362)	—	—
Repurchases of common stock .....	(410,188)	(1,312)	(78,177)
Net cash used in financing activities .....	(238,773)	(32,490)	(926,873)
Effects of exchange rate changes on cash and cash equivalents ....	1,612	1,218	34
Net increase (decrease) in cash and cash equivalents .....	(391,061)	(118,666)	65,204
Cash and cash equivalents at the beginning of the year .....	497,178	615,844	550,640
Cash and cash equivalents at the end of the year .....	<u>\$ 106,117</u>	<u>\$ 497,178</u>	<u>\$ 615,844</u>
<b>Supplemental disclosures:</b>			
Cash paid (received) during the year for:			
Interest .....	\$ 1,425	\$ 909	\$ 204
Income taxes, net .....	\$ 23,908	\$ 6,321	\$ (63,329)
<b>Non-cash financing activities:</b>			
Issuance of common stock and stock options related to			
SpeedFam-IPEC acquisition, net of deferred compensation			
of \$ 3,104 .....	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 166,736</u>
Subordinated debt assumed from SpeedFam-IPEC acquisition ...	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 116,437</u>

See accompanying Notes to the Consolidated Financial Statements.

**NOVELLUS SYSTEMS, INC.**  
**CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY**  
(In thousands)

	<u>Common Stock</u>		<u>Deferred</u>	<u>Retained</u>	<u>Accumulated</u>	<u>Total</u>
	<u>Shares</u>	<u>Amount</u>	<u>Compensation</u>	<u>Earnings</u>	<u>Other Comprehensive Income (Loss)</u>	<u>Shareholders' Equity</u>
Balance at December 31, 2001 .....	143,606	\$ 1,275,591	\$ (2,390)	\$ 597,267	\$ 1,526	\$ 1,871,994
Components of comprehensive income:						
Net income .....	—	—	—	22,920	—	22,920
Net change in unrealized losses on available-for-sale securities .....	—	—	—	—	(350)	(350)
Less: reclassification adjustment for gain on sale of an equity investment, net of tax of \$ 966 .....	—	—	—	—	(3,636)	(3,636)
Foreign currency translation adjustments .....	—	—	—	—	714	714
Comprehensive income .....						<u>19,648</u>
Issuance of common stock under employee compensation plans .....	2,870	54,434	—	—	—	54,434
Issuance of common stock and assumption of stock options in connection with the acquisition of SpeedFam-IPEC .....	5,733	169,840	(3,104)	—	—	166,736
Issuance of restricted common stock .....	100	3,811	(3,811)	—	—	—
Amortization of deferred compensation .....	—	—	1,626	—	—	1,626
Income tax benefits realized from activity in employee stock plans .....	—	19,427	—	—	—	19,427
Repurchases of common stock .....	(3,190)	(28,143)	—	(50,034)	—	(78,177)
Balance at December 31, 2002 .....	149,119	1,494,960	(7,679)	570,153	(1,746)	2,055,688
Components of comprehensive loss:						
Net loss .....	—	—	—	(67,814)	—	(67,814)
Net change in unrealized loss on available-for-sale securities .....	—	—	—	—	172	172
Foreign currency translation adjustments .....	—	—	—	—	6,146	6,146
Comprehensive loss .....						<u>(61,496)</u>
Issuance of common stock under employee compensation plans .....	3,696	75,651	—	—	—	75,651
Issuance of restricted common stock, net .....	116	3,963	(3,963)	—	—	—
Amortization of deferred compensation .....	—	—	3,329	—	—	3,329
Repurchases of common stock .....	(32)	(335)	—	(977)	—	(1,312)
Balance at December 31, 2003 .....	152,899	1,574,239	(8,313)	501,362	4,572	2,071,860
Components of comprehensive income:						
Net income .....	—	—	—	156,690	—	156,690
Net change in unrealized loss on available-for-sale securities .....	—	—	—	—	(571)	(571)
Less: reclassification adjustment for gain on sale of available-for-sale securities .....	—	—	—	—	(303)	(303)
Foreign currency translation adjustments, net of tax of \$ 4,194 .....	—	—	—	—	1,547	1,547
Comprehensive income .....						<u>157,363</u>
Issuance of common stock under employee compensation plans, net .....	1,731	38,847	—	(141)	—	38,706
Issuance of restricted common stock, net .....	450	12,939	(12,939)	—	—	—
Amortization of deferred compensation .....	—	—	4,093	—	—	4,093
Repurchases of common stock .....	(14,774)	(152,196)	—	(257,992)	—	(410,188)
Balance at December 31, 2004 .....	<u>140,306</u>	<u>\$ 1,473,829</u>	<u>\$ (17,159)</u>	<u>\$ 399,919</u>	<u>\$ 5,245</u>	<u>\$ 1,861,834</u>

See accompanying Notes to the Consolidated Financial Statements.

## NOVELLUS SYSTEMS, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### Note 1. Description of the Business

Novellus Systems, Inc. is primarily a supplier of semiconductor manufacturing equipment used in the fabrication of integrated circuits. We are focused on delivering innovative interconnect products and technologies that meet the increasingly complex and demanding needs of the world's largest semiconductor manufacturers. The semiconductor manufacturing equipment that we build, market and service provides today's semiconductor device manufacturers with high productivity and low cost of ownership.

As part of our growth strategy, from time to time we make acquisitions. On June 28, 2004, we acquired Peter Wolters AG, a manufacturer of high-precision machine manufacturing tools. The acquisition was accounted for as a purchase business combination. Our consolidated financial statements for 2004 include the financial position, results of operations and cash flows of Peter Wolters from the date of acquisition. With the acquisition of Peter Wolters AG, Novellus entered into the Industrial Applications market segment for the first time.

On December 6, 2002, we acquired SpeedFam-IPEC, Inc., a global supplier of chemical mechanical planarization (CMP) systems used in the fabrication of advanced copper interconnects. The acquisition was accounted for as a purchase business combination and qualified as a tax-free reorganization under IRS regulations. Our Consolidated Financial Statements for 2004, 2003 and 2002 include the financial position, results of operations and cash flows of SpeedFam-IPEC from date of acquisition.

#### Note 2. Significant Accounting Policies

*Principles of Consolidation and Basis of Presentation* — The accompanying Consolidated Financial Statements include our accounts and the accounts of our wholly-owned subsidiaries after elimination of all significant intercompany account balances and transactions. Certain prior year amounts in the Consolidated Financial Statements and the notes thereto have been reclassified to conform to the 2004 presentation.

*Stock-Based Compensation* — We account for stock-based employee compensation using the intrinsic value method under Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," or APB No. 25, and have adopted the disclosure-only provisions of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," or SFAS No. 123, as amended by SFAS No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosures." Accordingly, no expense has been recognized for options granted to employees at fair value.

In our consolidated statements of operations we recognize stock-based compensation, measured at the intrinsic value, on the graded vesting method over the vesting periods for restricted stock awards and stock options, which is generally four years. The graded vesting method provides for vesting of portions of the overall awards at interim dates and results in greater expense recorded in earlier years than the straight-line method.

In the disclosure presented below we recognize stock-based compensation, measured at the fair value, on the graded vesting method over the vesting periods for restricted stock awards and stock options, which is generally four years, and for employee purchases of common stock under our employee stock purchase plan, which is generally six months. The graded vesting method provides for vesting of portions of the overall awards at interim dates and results in greater expense recorded in earlier years than the straight-line method.

SFAS No. 123 requires the use of option pricing models that were not developed for use in valuing employee stock options. The Black-Scholes option-pricing model was developed for use in estimating the fair value of short-lived exchange-traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of highly subjective assumptions, including the option's expected life and the price volatility of the underlying stock. Since our employee stock options have characteristics significantly different from those of traded options and changes in the subjective input assumptions can materially affect the fair value estimate, in our opinion, the existing models do not necessarily provide a reliable single measure of the fair value of employee stock options.

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 2. Significant Accounting Policies (Continued)**

Had compensation expense been determined based on the fair value at the grant date for awards, consistent with the provisions of SFAS No. 123, we would have reported pro forma net income (loss) and net income (loss) per share as follows (in thousands, except per share data):

	<u>Years Ended December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
Net income (loss) as reported .....	\$ 156,690	\$ (67,814)	\$ 22,920
Add back:			
Intrinsic value method expense included in reported net income (loss), net of tax .....	2,906	2,186	1,178
Less:			
Fair value method expense, net of tax .....	(49,086)	(66,063)	(70,232)
Pro-forma net income (loss) .....	<u>\$ 110,510</u>	<u>\$ (131,691)</u>	<u>\$ (46,134)</u>
Pro-forma basic net income (loss) per share .....	\$ 0.76	\$ (0.87)	\$ (0.32)
Pro-forma diluted net income (loss) per share .....	\$ 0.75	\$ (0.87)	\$ (0.32)

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model, with the following weighted-average assumptions for grants made in 2004, 2003 and 2002:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Dividend yield .....	None	None	None
Expected volatility .....	74%	78%	85%
Risk free interest rate .....	2.7%	2.1%	3.1%
Expected lives .....	3.6 years	3.6 years	3.1 years

The weighted-average fair value of options granted during the year was \$ 15.45, \$ 21.56 and \$ 17.67 for 2004, 2003 and 2002, respectively. The effects of applying SFAS No. 123 on pro forma disclosures are not likely to be representative of the effects on pro forma disclosures of future periods.

The pro forma net income (loss) and net income (loss) per share listed above include expense related to our employee stock purchase plans. The fair value of issuances under the employee stock purchase plans is estimated on the date of issuance using the Black-Scholes option-pricing model, with the following weighted-average assumptions for issuances made in 2004, 2003 and 2002:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Dividend yield .....	None	None	None
Expected volatility .....	43%	47%	72%
Risk free interest rate .....	1.6%	1.3%	2.0%
Expected lives .....	1/2 year	1/2 year	1/2 year

The weighted average fair value of purchase rights granted during the year was \$8.04, \$9.52 and \$12.88 for 2004, 2003 and 2002, respectively.

*Use of Estimates* — The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and the related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis, including those related to revenue recognition, cash and investments, allowance for doubtful accounts, inventory valuation, deferred tax assets, property and equipment, goodwill and other intangible assets, warranty obligations, restructuring and impairment charges, contingencies and litigation and stock-based compensation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the current circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 2. Significant Accounting Policies (Continued)**

intent is to accurately state our assets and liabilities given facts known at the time of valuation. Our assumptions may prove incorrect as facts change in the future. Actual results may differ materially from these estimates under different assumptions or conditions.

*Revenue Recognition* — We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 104, "Revenue Recognition," or SAB 104, which superseded the earlier related guidance in SAB 101. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, our price is fixed or determinable, and collectibility is reasonably assured.

Certain of our equipment sales are accounted for as multiple-element arrangements. A multiple-element arrangement is a transaction which may involve the delivery or performance of multiple products, services, or rights to use assets, and performance may occur at different points in time or over different periods of time. Our equipment sales generally have two elements: 1) delivery of the equipment and 2) installation of the equipment and customer acceptance. If we have met defined customer acceptance experience levels with both the customer and the specific type of equipment, we recognize revenue for the equipment element upon shipment and transfer of title, with the installation and acceptance element recognized at customer acceptance. All other equipment sales are recognized upon customer acceptance.

Installation services are not essential to the functionality of the delivered equipment. As provided for in Emerging Issues Task Force ("EITF") No. 00-21, "Revenue Arrangements with Multiple Deliverables," we allocate revenue based on the residual method as a fair value has been established for installation services. However, since final payment is not typically billable until customer acceptance, we defer revenue for the final payment until customer acceptance.

Revenue related to sales of spare parts is recognized upon shipment. Revenue related to maintenance and service contracts is recognized ratably over the duration of the contracts. Unearned maintenance and service contract revenue is included in other accrued liabilities.

*Cash, Cash Equivalents and Short-Term Investments* — We consider all highly liquid debt instruments with insignificant interest rate risk and original maturities of ninety days or less to be cash equivalents. Investments with original maturities greater than three months which are available for use in current operations are considered to be short-term investments. Our short-term investments are classified as available-for-sale and are reported at fair value, with unrealized gains and losses, net of tax, recorded in shareholders' equity. The fair value of short-term investments is based on quoted market prices. Gains and losses and declines in fair value that are other than temporary are recorded in earnings when realized. The cost of securities sold is based on the specific identification method.

*Restricted Cash and Cash Equivalents* — We maintain certain amounts of cash and cash equivalents on deposit which are restricted from general use. These amounts are used primarily to secure our Euro Loan (see Note 10).

*Allowance for Doubtful Accounts* — We evaluate our allowance for doubtful accounts based on a combination of factors. In circumstances where we are aware of a specific customer's inability to meet its financial obligations, we provide a specific allowance for bad debt against the amount due to reduce the net recognized receivable to the amount we reasonably believe will be collected. We charge accounts receivable balances against our allowance for doubtful accounts once we have concluded our collection efforts. Accounts receivable is considered past due in accordance with the contractual terms of the arrangement.

*Inventories and Inventory Valuation* — Inventories are stated at the lower of cost (first-in, first-out) or market. We periodically assess the recoverability of all inventories, including raw materials, work-in-process, finished goods, and spare parts, to determine whether adjustments for impairment are required. Inventory that is obsolete or in excess of our forecasted usage is written down to its estimated realizable value based on assumptions about future demand and market conditions.

*Deferred Tax Assets* — We record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. The valuation allowance at December 31, 2004 relates primarily to acquired

## NOVELLUS SYSTEMS, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Note 2. Significant Accounting Policies (Continued)

net operating loss carryforwards and foreign tax credits that are not realizable until 2007 and beyond. The valuation allowance includes \$44.0 million related to acquired deferred tax assets of SpeedFam-IPEC which will be credited to goodwill when realized, and \$32.9 million related to stock option deductions which will be credited to equity when realized. We have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance.

*Property and Equipment* — Property and equipment are stated at cost. Depreciation and amortization are computed on the straight-line method over the following estimated useful lives:

Machinery and equipment	3–10 years
Furniture and fixtures	5–10 years
Buildings	30–40 years
Building improvements	Shorter of useful life or remaining lease term

*Goodwill and Other Intangible Assets* — We review our long-lived assets, including goodwill and other intangible assets, for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amount of these assets may not be recoverable. In accordance with our policy, we completed the goodwill impairment test in the fourth quarter of 2004. The first step of the test identifies if potential impairment may have occurred, while the second step of the test measures the amount of the impairment, if any. Impairment is recognized when the carrying amount of the asset exceeds the fair value. The results of our impairment tests did not indicate impairment.

*Investments in non-marketable equity securities* — We record investments in non-marketable equity securities at historical cost or, if we have significant influence over the investee, using the equity method of accounting. At December 31, 2004 and December 31, 2003, we did not have any equity securities that required the equity method of accounting. Non-marketable equity securities are included in other assets. The carrying value of non-marketable equity securities as of December 31, 2004 was \$2.5 million. At December 31, 2003, we did not have any investments in non-marketable equity securities. Non-marketable securities are periodically reviewed for impairment, which is based on an analysis of factors that may have adverse affects on the fair value of the investment. No impairment existed at December 31, 2004.

*Warranty* — Our warranty policy generally states that we will provide warranty coverage for a predetermined amount of time on systems and modules for material and labor to repair and service the equipment. We record the estimated cost of warranty coverage to cost of sales upon system shipment. The estimated cost of warranty is determined by the warranty term as well as the average historical labor and material costs for a specific product. We review the actual product failure rates and material usage rates on a quarterly basis and adjust our warranty liability as necessary.

*Restructuring and Impairment Charges* — Restructuring activities initiated prior to December 31, 2002 were recorded in accordance with Emerging Issues Task Force Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)," and restructuring activities after December 31, 2002 were recorded under the provisions of SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," or SFAS No. 146; SFAS No. 112, "Employers' Accounting for Postemployment Benefits;" and SAB 100, "Restructuring and Impairment Charges." SFAS No. 146 requires that a liability for costs associated with an exit or disposal activity be recognized when the liability is incurred, rather than when the exit or disposal plan is approved.

Certain restructuring charges related to asset impairments are recorded in accordance with SFAS No. 144 and SAB 100. Accordingly, restructuring accruals are recorded when management initiates an exit plan that will cause us to incur costs that have no future economic benefit. The restructuring accrual related to vacated facilities is calculated net of estimated sublease income. Sublease income is estimated based on current market quotes for similar properties. If we are unable to sublet the vacated properties on a timely basis or if we are forced to sublet them at lower rates due to changes in market conditions, we will adjust the accruals accordingly.

## NOVELLUS SYSTEMS, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Note 2. Significant Accounting Policies (Continued)

*Contingencies and Litigation* — We assess the probability of adverse judgments in connection with current and threatened litigation. We would accrue the cost of an adverse judgment if, in our estimation, the adverse outcome is probable and we can reasonably estimate the ultimate cost. We have made no such accruals as of December 31, 2004.

*Foreign Currency Translation* — For all of our foreign subsidiaries, the local currency is the functional currency. Accordingly, translation gains or losses related to these foreign subsidiaries are included as a component of accumulated other comprehensive income (loss).

*Forward Foreign Exchange Contracts* — Forward foreign exchange contracts are used to hedge against the short-term impact of foreign currency fluctuations on intercompany accounts payable denominated in U.S. dollars recorded by our Japanese subsidiary. We also enter into forward foreign exchange contracts to buy and sell foreign currencies to hedge the parent's intercompany balances denominated in a currency other than the U.S. dollar. In 2004 and 2003, these hedging contracts were denominated primarily in the Japanese Yen, Singapore Dollar and the Taiwanese Dollar. The forward foreign exchange contracts we use are generally short-term in nature. The effect of exchange rate changes on forward exchange contracts is expected to offset the effect of exchange rate changes on the underlying hedged items. We believe these financial instruments do not subject us to speculative risk that would otherwise result from changes in currency exchange rates. All unsettled foreign currency contracts are marked-to-market, with unrealized gains and losses included as a component of other income and expense. Net foreign currency gains and losses for effective and ineffective hedges are recorded in our results of operations.

*Shipping and Handling Costs* — Shipping and handling costs are included as a component of cost of sales.

*Advertising Expenses* — We expense advertising costs as incurred. Advertising expenses for 2004, 2003 and 2002 were \$2.9 million, \$1.9 million and \$2.7 million, respectively.

*Concentrations and Other Risks* — We use financial instruments that potentially subject us to concentrations of credit risk. Such instruments include cash equivalents, short-term investments, accounts receivable and financial instruments used in hedging activities. We invest our cash in cash deposits, money market funds, commercial paper, certificates of deposit, readily marketable debt securities, or medium-term notes. We place our investments with high-credit quality financial institutions, which limits the credit exposure from any one financial institution or instrument. To date, we have not experienced significant losses on these investments.

We sell a significant portion of our systems to a limited number of customers. System sales to our ten largest customers in 2004, 2003 and 2002 accounted for 69%, 76% and 79% of our total system sales, respectively. One customer accounted for 11% of receivables at December 31, 2004. No customer accounted for more than 10% of our accounts receivable as of December 31, 2003. We expect sales of our products to relatively few customers will continue to account for a high percentage of our total system sales in the foreseeable future. None of our customers have entered into a long-term purchase agreements that would require them to purchase our products.

We perform ongoing credit evaluations of our customers' financial condition and generally require no collateral. We have an exposure to nonperformance by counterparties on the foreign exchange contracts used in hedging activities. These counterparties are large international financial institutions and to date, no such counterparty has failed to meet its financial obligations to us. We do not believe there is a significant risk of nonperformance by these counterparties because we continuously monitor our positions, the credit ratings of such counterparties, and the amount of contracts we enter into with any one party.

Certain of the raw materials used by the Company in the manufacture of its products are available from a limited number of suppliers. Shortages could occur in these essential materials due to an interruption of supply or increased demand in the industry.

*Recent Accounting Pronouncements* — In March 2004, the Emerging Issues Task Force (EITF) issued EITF No. 03-1, "The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments" or EITF No. 03-1. EITF No. 03-1 includes guidance for determining and recording impairment for both debt and equity securities. EITF No. 03-1 also requires additional disclosure for investments that are deemed to be temporarily

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 2. Significant Accounting Policies (Continued)**

impaired under the standard. In September 2004, the FASB Staff issued FASB Staff Position (FSP) EITF 03-1-1, or FSP EITF 03-1-1. Effective upon issuance, FSP EITF 03-1-1 delayed, indefinitely, certain measurement and recognition guidance contained in EITF No. 03-1. Disclosures required under EITF No. 03-1 are included within Note 2 and Note 3 of the Notes to our Consolidated Financial Statements.

In November 2004, the Financial Accounting Standards Board (FASB) issued SFAS No. 151, Inventory Costs — An Amendment of ARB No. 43, Chapter 4, which clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage). We are required to adopt SFAS No. 151 on January 1, 2006 and its adoption is not expected to have a significant impact on our results of operations or financial position.

In December 2004, the FASB issued SFAS No. 153, Exchanges of Nonmonetary Assets, an amendment of APB Opinion No. 29. SFAS No. 153 addresses the measurement of exchanges of nonmonetary assets and redefines the scope of transactions that should be measured based on the fair value of the assets exchanged. SFAS No. 153 is effective for us for nonmonetary asset exchanges beginning in the third quarter of 2005. The adoption of SFAS No. 153 is not expected to have a material effect on our consolidated financial position or results of operations.

On December 16, 2004, the FASB issued FASB Statement No. 123 (revised 2004), Share-Based Payment, or Statement 123(R), which is a revision of FASB Statement No. 123, "Accounting for Stock-Based Compensation". Statement 123(R) supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees," or Opinion 25, and amends FASB Statement No. 95, "Statement of Cash Flows." Generally, the approach in Statement 123(R) is similar to the approach described in the unrevised Statement 123. However, Statement 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values. Pro forma disclosure is no longer an alternative. Statement 123(R) must be adopted no later than the beginning of our fiscal third quarter, with early adoption permitted. We expect to adopt Statement 123(R) on July 3, 2005.

As permitted by the unrevised Statement 123, we currently account for share-based payments to employees using Opinion 25's intrinsic value method, under which we generally do not record compensation cost for employee stock options. Accordingly, the adoption of Statement 123(R)'s fair value method will have a significant impact on our results of operations, although it will have no impact on our overall financial position. The impact of adoption of Statement 123(R) cannot be predicted at this time because it will depend, in part, on levels of share-based payments granted in the future. However, had we adopted Statement 123(R) in prior periods, the impact of that standard would have approximated the impact of Statement 123 as described in the disclosure of pro forma net income and earnings per share in Note 2 to our Consolidated Financial Statements. Statement 123(R) also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. While we cannot estimate what those amounts will be in the future (because they depend on, among other things, when employees exercise stock options), the amount of operating cash flows recognized in prior periods for such excess tax deductions were zero in 2004 and 2003, and \$19.4 million in 2002.



**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 3. Financial Instruments**

*Short-term Investments*

The cost and estimated fair value of our short-term investments are as follows (in thousands):

December 31, 2004				
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
U.S. Government agencies .....	\$ 25,610	\$ —	\$ (155)	\$ 25,455
Municipal securities .....	272,559	324	(617)	272,266
Corporate securities .....	34,258	—	(125)	34,133
Tax-exempt auction rate notes .....	145,050	—	—	145,050
Mutual funds .....	5,155	—	(414)	4,741
Total .....	<u>\$ 482,632</u>	<u>\$ 324</u>	<u>\$ (1,311)</u>	<u>\$ 481,645</u>

December 31, 2003				
	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
U.S. Government agencies .....	\$ 287,417	\$ 78	\$ (67)	\$ 287,428
Municipal securities .....	53,057	16	(27)	53,046
Commercial paper .....	6,970	10	—	6,980
Corporate securities .....	52,500	57	(23)	52,534
Tax-exempt auction rate notes .....	102,125	—	—	102,125
Mutual funds .....	6,941	374	(593)	6,722
Total .....	<u>\$ 509,010</u>	<u>\$ 535</u>	<u>\$ (710)</u>	<u>\$ 508,835</u>

For the year ended December 31, 2004, gross realized gains and losses on short-term investments were \$0.4 million and \$0.1 million, respectively. For the year ended December 31, 2003, gross realized gains or losses on short-term investments were not significant. The maturities of our restricted cash and cash equivalents and our short-term investments as of December 31, 2004 are as follows (in thousands):

December 31, 2004	Amount
Due in less than one year .....	\$ 327,987
Due in 1 to 3 years .....	157,505
Due in 3 to 5 years .....	5,000
Due in 5 to 10 years .....	6,715
Due in greater than 10 years .....	161,146
Total .....	<u>\$ 658,353</u>

Securities with contractual maturities of over three years are either auction rate securities or variable rate demand notes. While the contractual maturities are long-term, we believe the securities are highly liquid and that the Company can take advantage of interest rate re-set periods of between one and thirty-five days to liquidate the securities. Management has the ability and intent, if necessary, to liquidate these investments to fund operations within the next twelve months and accordingly has classified all non-restricted investments as short-term investments in the Consolidated Balance Sheets. The “due in less than one year” category contains \$4.7 million in mutual funds that do not have contractual maturities.

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 3. Financial Instruments (Continued)**

The breakdown of the short-term investments with unrealized losses at December 31, 2004 is as follows (in thousands):

	In Loss Position for Less Than 12 Months		In Loss Position for 12 Months or Greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Government agencies .....	\$ 25,455	\$ (155)	\$ —	\$ —	\$ 25,455	\$ (155)
Municipal securities .....	168,688	(617)	—	—	168,688	(617)
Corporate securities .....	26,572	(107)	7,561	(18)	34,133	(125)
Mutual funds .....	—	—	4,741	(414)	4,741	(414)
Total .....	<u>\$ 220,715</u>	<u>\$ (879)</u>	<u>\$ 12,302</u>	<u>\$ (432)</u>	<u>\$ 233,017</u>	<u>\$ (1,311)</u>

The gross unrealized losses related to investments are primarily due to changes in interest rates. We view these unrealized losses as temporary in nature. We review our investment portfolio for possible impairment. Impairment is based on an analysis of factors that may have adverse affects on the fair value of the investment. Factors considered in determining whether a loss is temporary include the stability of the credit quality, the structure of the security and the ability to hold the investment to maturity.

***Fair Value of Other Financial Instruments***

The carrying and estimated fair values of our other financial instruments are as follows (in thousands):

	December 31,			
	2004		2003	
	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
Restricted cash & cash equivalents — non-current ..	\$ 176,708	\$ 176,708	\$ 2,861	\$ 2,861
Current obligations under lines of credit .....	3,103	3,103	13,023	13,023
Long-term debt .....	161,103	161,103	—	—

For certain of our financial instruments, including restricted investments and current obligations under our lines of credit, the carrying amounts approximate fair value due to their short maturities. The investments included in non-current restricted investments are all cash and cash equivalents. The estimated fair values of our restricted investments in 2004 and 2003 are based on quoted prices as of December 31, 2004 and December 31, 2003, respectively. Our long-term debt is not publicly traded and is denominated in Euros. Judgment is required to estimate the fair value, using available market information and appropriate valuation methods. The estimated fair value of the long-term debt is based primarily on borrowing rates currently available to the company for bank loans with similar terms and maturities.

***Financial Instruments with Off-Balance Sheet Risk***

As part of our asset and liability management, we enter into various types of transactions that involve financial instruments with off-balance sheet risk. We enter into foreign forward exchange contracts in order to manage foreign exchange risk. The notional amounts, carrying amounts and estimated fair values of our foreign currency forward exchange contracts are as follows (in thousands):

	December 31,					
	2004			2003		
	Notional Amount	Carrying Amount	Estimated Fair Value	Notional Amount	Carrying Amount	Estimated Fair Value
Sell (buy) foreign currencies .....	\$ 47,997	\$ (4,873)	\$ (4,873)	\$ (5,396)	\$ (2,996)	\$ (2,996)

The fair value of our foreign forward exchange contracts is calculated based on quoted market prices or pricing models using current market rates as of December 31, 2004 and 2003, respectively.

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 3. Financial Instruments (Continued)**

*Interest Rate Swap*

In our acquisition of Peters Wolters AG, we acquired an interest rate and currency swap, which is marked to market at the end of each reporting period. The swap has a notional amount of \$1.4 million and expires in September 2006. The fair market value adjustment as of December 31, 2004 was not significant.

**Note 4. Balance Sheet Details**

*Inventories*

	December 31,	
	2004	2003
	(In thousands)	
Purchased and spare parts .....	\$ 192,935	\$ 146,399
Work-in-process .....	54,586	37,502
Finished goods .....	13,525	15,199
Total inventories .....	<u>\$ 261,046</u>	<u>\$ 199,100</u>

*Property and equipment, net*

	December 31,	
	2004	2003
	(In thousands)	
Property and equipment:		
Machinery and equipment .....	\$ 561,392	\$ 530,925
Buildings and land .....	246,334	235,304
Building improvements .....	84,229	84,720
Furniture and fixtures .....	21,438	19,628
	913,393	870,577
Less accumulated depreciation .....	<u>436,901</u>	<u>364,010</u>
Total property and equipment .....	<u>\$ 476,492</u>	<u>\$ 506,567</u>

Depreciation expense for the years ended December 31, 2004, 2003 and 2002 was \$80.2 million, \$58.7 million and \$44.7 million, respectively.

*Accrued warranty*

Changes in our accrued warranty liability were as follows (in thousands):

	Years Ended December 31,	
	2004	2003
Balance, beginning of period .....	\$ 28,805	\$ 31,002
Warranties issued .....	77,267	42,229
Settlements .....	(66,698)	(47,270)
Peter Wolters AG balance at acquisition .....	2,367	—
Changes in liability for pre-existing warranties, including expirations .....	3,785	2,844
Balance, end of period .....	<u>\$ 45,526</u>	<u>\$ 28,805</u>

# NOVELLUS SYSTEMS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### Note 5. Earnings (Loss) Per Share

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. For purposes of computing basic net income (loss) per share, the weighted-average number of outstanding shares of common stock excludes shares of restricted stock subject to repurchase.

Diluted net income (loss) per share is computed using the weighted-average number of shares of common stock outstanding, including shares of restricted common stock subject to repurchase and, when dilutive, potential shares from stock options to purchase common stock, using the treasury stock method and from convertible securities on an as-if-converted basis.

Reconciliation of the numerators and denominators of the basic and diluted per share computations (in thousands, except for per share amounts):

	Years Ended December 31,		
	2004	2003	2002
Numerator:			
Net income (loss) .....	\$ 156,690	\$ (67,814)	\$ 22,920
Denominator:			
Basic weighted-average shares outstanding .....	145,956	150,680	144,371
Employee stock options and restricted stock .....	1,981	—	4,377
Diluted weighted-average shares outstanding .....	<u>147,937</u>	<u>150,680</u>	<u>148,748</u>
Basic net income (loss) per share .....	\$ 1.07	\$ (0.45)	\$ 0.16
Diluted net income (loss) per share .....	\$ 1.06	\$ (0.45)	\$ 0.15

Options to purchase 15.2 million, 8.8 million and 8.7 million shares of common stock at weighted-average prices of \$38.85, \$43.13 and \$42.60 per share were outstanding during 2004, 2003 and 2002, respectively, but were not included in the computation of diluted net income per common share because the effect would be anti-dilutive.

### Note 6. Goodwill and Other Intangible Assets

#### Goodwill

Changes in goodwill are as follows (in thousands):

	Years ended	
	2004	2003
Balance, beginning of period .....	\$ 173,267	\$ 163,136
SpeedFam-IPEC adjustment .....	(11,037)	10,131
Peter Wolters AG acquisition .....	104,221	—
Peter Wolters AG adjustment.....	414	—
Foreign currency translation .....	<u>12,107</u>	<u>—</u>
Balance, end of period .....	<u>\$ 278,972</u>	<u>\$ 173,267</u>

We completed the annual goodwill impairment test in the fourth quarters of 2004 and 2003 in accordance with our policy. We also completed a goodwill impairment test in the third quarter of 2003 in conjunction with our restructuring activities. The first step of the test identifies if potential impairment may have occurred, while the second step of the test measures the amount of the impairment, if any. The results of our impairment tests did not indicate impairment.

During 2004, we determined that certain tax accruals recorded during the acquisition of SpeedFam-IPEC in 2002 were no longer required, and we accordingly reversed \$11.0 million against goodwill. As a result of our acquisition of Peter Wolters AG on June 28, 2004, we recorded goodwill in the amount of \$104.2 million, which is subject to foreign currency translation effects. The related foreign currency translation effects for the year ended

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 6. Goodwill and Other Intangible Assets (Continued)**

December 31, 2004 resulted in an increase to goodwill of \$12.1 million. Additionally, we recorded an increase to goodwill of \$0.4 million related to a property tax accrual associated with the acquisition of Peter Wolters AG.

In 2003, we recorded a net increase to goodwill of approximately \$10.1 million. The adjustment to goodwill is a result of additional purchase price costs and the reallocation of the initial estimated purchase price allocation for the acquisition of SpeedFam-IPEC.

The goodwill associated with the Peter Wolters acquisition is attributable to the Industrial Applications Group operating segment, as are the translation-related changes to goodwill and the adjustment of \$0.4 million related to a property tax accrual. All other goodwill, including any adjustments made to goodwill during 2004 is attributable to the Semiconductor Group operating segment.

***Intangible Assets***

Our acquired intangible assets (in thousands):

<u>December 31, 2004</u>	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Net</u>
Patents.....	\$ 4,197	\$ (525)	\$ 3,672
Developed technology .....	28,095	(6,928)	21,167
Trademark .....	6,809	(340)	6,469
Other intangible assets.....	138	(81)	57
Total.....	<u>\$ 39,239</u>	<u>\$ (7,874)</u>	<u>\$ 31,365</u>
<u>December 31, 2003</u>	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Net</u>
Patents.....	\$ 11,680	\$ (10,912)	\$ 768
Developed technology .....	17,380	(3,138)	14,242
Other intangible assets.....	1,160	(1,093)	67
Total.....	<u>\$ 30,220</u>	<u>\$ (15,143)</u>	<u>\$ 15,077</u>

The amortization expense for the identifiable intangible assets was approximately \$7.9 million, \$3.6 million and \$1.4 million for the years ended December 31, 2004, 2003 and 2002, respectively. Our estimated amortization expense for the identifiable intangible assets for each of the next five fiscal years will be approximately \$6.1 million for 2005 through 2007, \$5.8 million for 2008 and \$3.2 million for 2009. As of December 31, 2004, we have no identifiable intangible assets with indefinite lives. During 2003, we wrote off \$5.5 million of purchased technology. For further discussion of this write-off, see Note 9.

**Note 7. Business Combination**

On June 28, 2004, we acquired all of the outstanding stock of Peter Wolters AG, a privately-held manufacturer of high-precision machine manufacturing tools based in Rendsburg, Germany. The acquisition of Peter Wolters enables us to diversify our product offerings. We funded the purchase price of the acquisition, excluding transaction costs, with approximately \$149.5 million of borrowings under a credit facility. For further discussion regarding the credit facility, see Note 10. Under the terms of the purchase agreement, we deposited ten percent of the purchase price into escrow. The escrow amount will be released to the former shareholders of Peter Wolters on June 25, 2005, to the extent we have not made claims against the escrow for pre-acquisition contingencies.

The acquisition of Peter Wolters was accounted for as a business combination in accordance with SFAS No. 141, "Business Combinations." Tangible and intangible assets and liabilities were recorded at their estimated fair value.

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 7. Business Combination (Continued)**

The preliminary purchase price was allocated to the fair value of assets acquired and liabilities assumed as follows (in thousands):

Cash consideration .....	\$ 149,512
Estimated transaction costs .....	2,100
Total purchase price .....	<u>\$ 151,612</u>
Cash and cash equivalents .....	\$ 8,696
Accounts receivable .....	10,560
Inventory .....	25,216
Deferred tax asset .....	1,454
Prepaid expenses and other current assets .....	147
Property, plant and equipment .....	19,492
Goodwill .....	104,221
Developed technology .....	9,600
Customer backlog .....	2,400
Trademark/Tradename .....	6,100
Other assets .....	23
Accounts payable .....	(4,726)
Accrued payroll and related expenses .....	(7,399)
Accrued warranty .....	(1,761)
Other current liabilities .....	(6,634)
Deferred tax liability .....	(8,306)
Income tax payable .....	(102)
Long-term debt .....	(967)
Other long-term liabilities .....	<u>(6,402)</u>
Total net assets acquired .....	<u>\$ 151,612</u>

**Intangible Assets** — As of the closing of our acquisition of Peter Wolters on June 28, 2004, \$18.1 million of the total purchase price was allocated to intangible assets subject to amortization. Included in these intangible assets are developed and core technologies, customer backlog and trademark/trade name rights with weighted average lives of 6.0, 0.5, and 10.0 years, respectively. The weighted average life for all intangibles acquired in the acquisition was 6.6 years.

**Goodwill** — The potential value of the combined companies' products and technologies contributed to a purchase price that resulted in goodwill. Goodwill represents the excess of the purchase price of an acquired business over the fair value of the underlying net tangible and intangible assets. Goodwill is not deductible for tax purposes and is not subject to amortization, however, it is to be tested for impairment at least annually in accordance with SFAS No. 142. Approximately \$104.2 million of the total purchase price was allocated to goodwill upon the closing of our acquisition of Peter Wolters on June 28, 2004. Subsequent to the acquisition date, we recorded an additional liability related to a property tax accrual of \$0.4 million with a corresponding increase to goodwill.

# NOVELLUS SYSTEMS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### Note 7. Business Combination (Continued)

**Unaudited Pro Forma Results** — The following table represents the unaudited pro forma consolidated results of operations, assuming the acquisition of Peter Wolters was consummated as of the beginning of the periods presented. The unaudited pro forma information has been prepared for comparative purposes only and may not be indicative of what operating results would have been if the acquisition had taken place at the beginning of the periods presented. In addition, the unaudited pro forma information may not be indicative of future operating periods. The combined operating results below consist of historical results of Novellus and Peter Wolters for the years ended December 31, 2004 and 2003.

(in thousands, except per share data)	December 31,	
	2004	2003
Net sales .....	\$ 1,396,391	\$ 974,127
Income (loss) before cumulative effect of a change in accounting principle .....	\$ 158,766	\$ (8,071)
Cumulative effect of change in accounting principle, net of tax .....	\$ —	\$ (62,780)
Net income (loss) .....	\$ 158,766	\$ (70,851)
Diluted net income (loss) per share .....	\$ 1.07	\$ (0.47)

### Note 8. Asset Purchase Transaction

In April 2004, we acquired Angstrom Systems, Inc., a developer of atomic layer deposition technology for advanced semiconductor manufacturing for total consideration of approximately \$9.8 million, including transaction costs of approximately \$0.3 million. We evaluated the business combination criteria within SFAS No. 141, and, after consideration of these criteria and the criteria included within EITF No. 98-3 "Determining Whether a Nonmonetary Transaction Involves Receipt of Productive Assets or of a Business", determined that the purchase of Angstrom represented a purchase of assets rather than a business combination, and accordingly, the tangible assets acquired and liabilities assumed were recorded at their estimated fair values at the date of acquisition. The intangible assets acquired were valued under the provisions of SFAS No. 142, "Goodwill and Other Intangible Assets." A portion of the purchase price was allocated to existing technology and acquired in-process research and development ("IPR&D"). The assets were identified and valued through analysis of data concerning developmental products, their stage of development, the time and resources needed to complete them, their expected income generating ability, target markets and associated risks.

Those developmental projects that had not reached technological feasibility and had no alternative future use were classified as IPR&D and expensed in the second quarter of 2004. The nature of the efforts required to develop the IPR&D into commercially viable products principally relates to the completion of all planning, designing, prototyping, verification and testing activities that are necessary to establish that the products can be produced to meet their design specifications, including functions, features and technical performance requirements.

The purchase price was allocated to the fair value of assets acquired and liabilities assumed as follows (in thousands):

Cash consideration .....	\$ 9,500
Estimated transaction costs .....	320
Total purchase price .....	<u>\$ 9,820</u>
Patents .....	\$ 4,197
Acquired in-process research and development .....	6,124
Tangible assets acquired .....	265
Deferred tax liability, net .....	(267)
Liabilities assumed .....	<u>(499)</u>
Total net assets acquired .....	<u>\$ 9,820</u>

The estimated useful life for all patents acquired in the acquisition was 6.0 years.

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 9. Restructuring and Other Charges**

As of December 31, 2004, substantially all actions under the 2004, 2003, 2002 and 2001 restructuring plans had been completed, except for payments of future rent obligations of \$41.7 million, which are to be paid in cash through year 2017. All restructuring and other charges are related to the semiconductor segment.

The following table summarizes activity related to restructuring charges that we recorded in the three years ended December 31, 2004 (in thousands):

	<u>Facilities</u>	<u>Asset Impairment</u>	<u>Severance</u>	<u>Acquisition Expense</u>	<u>Total</u>	<u>Inventory Write- down</u>
Balance at December 31, 2001 .....	\$ 26,849	\$ —	\$ —	\$ —	\$ 26,849	\$ —
Restructuring charges for 2002 .....	1,478	—	4,989	—	6,467	—
SpeedFam-IPEC restructuring charges ....	27,024	—	251	1,253	28,528	—
Cash payments .....	(9,783)	—	(4,989)	—	(14,772)	—
Balance at December 31, 2002 .....	45,568	—	251	1,253	47,072	—
Restructuring charges for 2003 .....	4,088	7,943	3,807	—	15,838	43,952
SpeedFam-IPEC acquisition adjustment ...	11,032	—	—	—	11,032	—
Cash payments .....	(9,828)	—	(3,466)	(138)	(13,432)	—
Non-cash adjustment .....	(347)	(7,943)	—	—	(8,290)	(43,952)
Balance at December 31, 2003 .....	50,513	—	592	1,115	52,220	—
Restructuring charges (benefits) for 2004 ..	(923)	1,220	1,187	—	1,484	—
SpeedFam-IPEC acquisition adjustment ...	—	—	—	(799)	(799)	—
Non-cash adjustment .....	—	(1,057)	—	—	(1,057)	—
Cash payments .....	(7,909)	—	(1,619)	(118)	(9,646)	—
Balance at December 31, 2004 .....	<u>\$ 41,681</u>	<u>\$ 163</u>	<u>\$ 160</u>	<u>\$ 198</u>	<u>\$ 42,202</u>	<u>\$ —</u>

In 2004, we incurred a net restructuring charge of \$1.5 million to align our research and development and manufacturing operations with current business conditions. The restructuring charge is comprised of \$1.2 million for asset write-offs, \$1.2 million for severance and a reversal of \$0.9 million for facilities. These charges are included in restructuring and other charges in the consolidated statement of operations.

In the third quarter of 2003, we announced a restructuring plan to align our cost structure with current business conditions. The restructuring plan resulted in a pre-tax charge of \$59.8 million in the third quarter, which is comprised of \$44.0 million for the write-down of inventory, \$7.9 million for asset write-offs (including fixed assets and purchased technology), \$4.1 million for vacated facilities, and \$3.8 million for severance. The inventory charge is included in cost of sales and the other charges are included in restructuring and other charges in the consolidated statement of operations.

The restructuring charges in 2002 include approximately \$28.5 million incurred in connection with exiting activities of SpeedFam-IPEC that were recognized as liabilities assumed in the purchase business combination. These activities relate primarily to facilities-related charges of \$27.0 million, severance-related charges of \$0.3 million and other costs associated with exiting activities of SpeedFam-IPEC of \$1.2 million.

**Facilities**

During the third quarter 2004, we entered into a sublease for a building in the U.S. that was previously included in our estimate of future costs to be incurred under the 2001 restructuring plan. We have revised our estimate of future facilities-related expenses based primarily on this sublease and recorded a reduction of \$0.9 million in the accrual.

The facilities restructuring charge in the third quarter of 2003 primarily relates to abandoned corporate facilities from our January 2001 acquisition of GaSonic International Corporation. The charge consists of \$1.1 million of repair and restoration costs and \$3.0 million related to the decrease in our future sublease income estimate noted above. In addition to the restructuring charge, we further lowered our estimate of future sublease income on abandoned facilities from the SpeedFam-IPEC acquisition by \$11.0 million. The SpeedFam-IPEC facilities adjustment resulted in an increase to goodwill due to a reallocation of our purchase price. For further discussion on the goodwill increase, see Note 6.



## NOVELLUS SYSTEMS, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Note 9. Restructuring and Other Charges (Continued)

The facility-related charges of \$27.0 million in 2002 were attributable to the closure and/or subletting of excess SpeedFam-IPEC office space, primarily in the U.S. and Asia. The majority of the facility-related charges consisted of remaining rent obligations and restoration costs offset by estimated sublease income of approximately \$44.1 million. The estimated costs of abandoning these leased facilities, including estimated sublease income, were based primarily on market information. In the third quarter of 2003, we lowered the estimated sublease income related to the SpeedFam-IPEC facilities by \$11.0 million, as discussed above. During 2002 an additional charge of \$1.5 million was recorded due to a decrease in our future sublease income estimate.

##### *Asset Impairment*

In the fourth quarter of 2004, we abandoned R&D assets in the U.S. and recorded a charge of \$1.2 million. We do not expect to recover the carrying value of these assets through future cash flows.

In the third quarter of 2003, we abandoned assets and wrote off purchased technology of \$7.9 million. The charge for abandoned assets of \$2.4 million primarily related to previous generation lab equipment. These assets were abandoned as we did not expect to recover the carrying value through future cash flows. The write-off of purchased technology of \$5.5 million relates to technology previously purchased from a third party vendor for use in certain research and development projects. The purchased technology was written off as these research and development projects were cancelled and there was no estimated future economic benefit for the purchased technology.

##### *Severance*

In the fourth quarter of 2004, we reduced our workforce by approximately 3% in response to market conditions and recorded charges of \$1.2 million, primarily for the cost of severance compensation. This workforce reduction affected approximately 80 people primarily within our manufacturing and research and development functions in the US. Substantially all of these severance-related charges had been paid as of December 31, 2004.

In the third quarter of 2003, we reduced our workforce by approximately 7% in response to market conditions and recorded charges of \$3.8 million, primarily for the cost of severance compensation. This workforce reduction affected approximately 200 people across all business functions, operating units and major geographic regions. Substantially all of these severance-related charges had been paid as of December 31, 2003.

In the first and fourth quarters of 2002, we reduced our workforce by approximately 13.1% and 8.0%, respectively, in response to market conditions, and accordingly recorded charges of \$3.3 million and \$1.7 million, respectively, primarily for the cost of severance compensation. These employee reductions affected approximately 500 people across all business functions, operating units and major geographic regions. As of December 31, 2002, substantially all severance benefits related to these reductions in workforce had been paid. SpeedFam-IPEC's severance-related charges of \$0.3 million were attributable to workforce reductions in the U.S. and various international locations across many business functions and job classes. The charges include severance, payroll taxes and COBRA benefits. All of these severance-related charges had been paid as of December 31, 2003.

##### *Acquisition Costs*

In the third quarter of 2004, we determined that a tax accrual recorded during the acquisition of SpeedFam-IPEC in 2002 was no longer required and reversed \$0.8 million of the accrual recorded in the original purchase price allocation against goodwill.

Other costs of \$1.2 million recorded in 2002 primarily relate to legal and other professional fees as well as other exit costs associated with the closing of SpeedFam-IPEC's foreign entities.

##### *Inventory Write-downs*

The inventory charge in the third quarter of 2003 was a result of a sustained shift in our customers' order patterns from 200mm to 300mm equipment, which resulted in reduced demand for our 200mm equipment.

# NOVELLUS SYSTEMS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### Note 9. Restructuring and Other Charges (Continued)

Furthermore, the levels of required spares inventory were reduced due to a streamlining of our worldwide spares distribution system. These changes resulted in a portion of our inventory becoming excess or obsolete and led to a \$44.0 million write-down of inventory.

### Note 10. Long-term Debt

On June 28, 2004, we borrowed \$153.1 million to fund the acquisition of Peter Wolters AG and for general corporate purposes. The credit arrangement allows for periodic borrowings in Euros, with an interest rate equal to the Eurocurrency Rate plus 0.2% (2.35% at December 31, 2004) and requires us to maintain certain financial covenants. We were in compliance with our debt covenants as of December 31, 2004. The outstanding balance of \$160.2 million is recorded as long-term debt at December 31, 2004. This credit facility is required to be secured by cash or marketable securities on deposit and is due and payable on or before June 25, 2009. Amounts to secure this borrowing are included within restricted cash and cash equivalents on the consolidated balance sheets at December 31, 2004.

One of our subsidiaries also maintains a borrowing of \$0.9 million at December 31, 2004. This facility is for general corporate purposes and bears interest of 4.82% at December 31, 2004. Amounts under this credit arrangement are due and payable in installments through June 30, 2009.

At December 31, 2004, we have an aggregate amount of \$10.7 million available for future borrowing under our long-term borrowing arrangements.

### Note 11. Other, net

The components of other, net within the consolidated statements of operations are as follows (in thousands):

	Years Ended December 31,		
	2004	2003	2002
Litigation proceeds .....	\$ 8,000	\$ —	\$ —
Gain on sale of equity security .....	—	—	4,602
Write-off of debt issuance costs .....	—	—	(17,047)
Other income .....	2,160	1,168	163
Other expense .....	(761)	(345)	—
Foreign currency gain (loss), net .....	(1,040)	(920)	172
Total other, net .....	<u>\$ 8,359</u>	<u>\$ (97)</u>	<u>\$ (12,110)</u>

### Note 12. Commitments and Guarantees

#### Variable Interest Entities

In January 2003, the FASB issued FASB Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51," or FIN 46. FIN 46 requires variable interest entities to be consolidated by the primary beneficiary of the entity. An entity is considered a variable interest entity if the equity investors in the entity do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. We adopted FIN 46 on June 29, 2003.

Pursuant to the guidelines of FIN 46, we concluded that the lessor in our synthetic leases was a variable interest entity and that we were the primary beneficiary of the variable interest entity. As such, we were required to consolidate the variable interest lessor beginning on June 29, 2003. Additionally, since each of the other lessees involved with this lessor had a variable interest in specified assets and liabilities of the variable interest lessor, we were only required to consolidate the specific assets, liabilities, and operating results associated with our synthetic leases. As a result of the early adoption of FIN 46, we recorded a non-cash charge of approximately \$62.8 million,

## NOVELLUS SYSTEMS, INC.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

#### Note 12. Commitments and Guarantees (Continued)

net of tax, in the third quarter of fiscal 2003 as a cumulative effect of a change in accounting principle in accordance with APB Opinion No. 20, "Accounting Changes." The gross charge represented approximately \$95.8 million of pre-tax depreciation that would have been recorded had we consolidated these assets from inception of the leases. As a result of the adoption of FIN 46 and the exercise of our option to purchase the properties subject to the synthetic leases in September 2003, property and equipment increased on a net basis by approximately \$360.6 million and notes receivable and other non-current assets decreased by \$456.4 million. The purchase of these properties in September 2003 eliminated our interest in the variable interest entity.

The consolidation and subsequent purchase of the facilities previously accounted for as synthetic leases increased our depreciation expense by approximately \$8.5 million per quarter and decreased both our rent expense and interest income by approximately \$3.0 million per quarter from 2002 levels. The adoption of FIN 46 and the exercise of our purchase option had no impact on our liquidity.

#### *Standby Letters of Credit*

We provide standby letters of credit to certain parties as required for certain transactions we initiate during the ordinary course of business. As of December 31, 2004, the maximum potential amount of future payments that we could be required to make under these letters of credit was approximately \$4.4 million. We have not recorded any liability in connection with these arrangements beyond that required to appropriately account for the underlying transaction being guaranteed. We do not believe, based on historical experience and information currently available, that it is probable that any amounts will be required to be paid under these arrangements.

#### *Guarantee Arrangements*

We have guarantee arrangements on behalf of certain of our consolidated subsidiaries. These guarantee arrangements are for line-of-credit borrowings, overdrafts and operating leases. The available short-term credit facilities with various financial institutions total \$57.8 million, of which \$54.7 million was unutilized as of December 31, 2004. These credit facilities bear interest at various rates, expire on various dates through December 2005 and are used for general corporate purposes. As of December 31, 2004, our subsidiaries had \$3.1 million outstanding under the short-term lines of credit at a weighted-average interest rate of 5.0%.

We also have available long-term credit facilities with various institutions that total \$171.8 million, of which \$10.7 million was unutilized as of December 31, 2004. The long-term credit facilities are used to fund the acquisition of Peter Wolters AG and for general corporate purposes. These credit facilities bear interest at various rates and expire in June 2009. As of December 31, 2004, we had \$161.1 million in long-term outstanding debt.

In the event of default of these facilities by our subsidiaries, we would guarantee up to a maximum exposure of \$48.8 million as of December 31, 2004.

In addition, we guarantee the lease arrangements of certain subsidiaries. These subsidiary leases will expire between 2005 and 2010. In the event that our subsidiaries do not make the required payments, we could be required to make payments on the leases on their behalf. The annual lease obligations under these arrangements are included in our consolidated minimum lease payments table below. As of December 31, 2004, we have not recorded any liability related to guarantees of subsidiary obligations. Based on historical experience and information currently available to us, we do not believe it is probable that any amounts will be required to be paid under these guarantee arrangements.

#### *Lease Commitments*

We have non-cancelable operating leases for various facilities. Rent expense was approximately \$11.0 million, \$13.1 million and \$10.4 million for the years ended December 31, 2004, 2003 and 2002, respectively, net of sublease income of \$3.7 million, \$7.9 million and \$7.4 million, respectively. Certain of the operating leases contain provisions which permit us to renew the leases at the end of their respective lease terms.

# NOVELLUS SYSTEMS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### Note 12. Commitments and Guarantees (Continued)

The following is a table summarizing future minimum lease payments under all non-cancelable operating leases, with initial or remaining terms in excess of one year (in thousands).

	Years Ending December 31,						Sublease Income	Net Total
	2005	2006	2007	2008	2009	Thereafter		
Non-cancelable operating leases	\$ 12,626	\$ 12,231	\$ 7,220	\$ 7,081	\$ 7,222	\$ 39,543	\$ (17,509)	\$ 68,414

#### *Purchase Commitments*

We have firm purchase commitments with various suppliers to ensure the availability of components. Our minimum obligation at December 31, 2004 under these arrangements was \$45.9 million. All amounts under these arrangements are due in 2005. Actual expenditures will vary based upon the volume of the transactions and length of contractual service provided. In addition, the amounts paid under these arrangements may be less in the event that the arrangements are renegotiated or cancelled. Certain agreements provide for potential cancellation penalties.

### Note 13. Litigation

#### *Applied Materials, Inc.*

On September 20, 2004, we settled all pending patent litigation with Applied Materials, Inc. by entering into a Binding Memorandum of Understanding, referred to herein as an MOU, with Applied. The MOU was effective as of September 3, 2004.

#### *Background of the Litigation*

On June 13, 1997, we acquired the Thin Film Systems (TFS) business of Varian Associates, Inc. On the same day, Applied sued Varian in the United States District Court for the Northern District of California for alleged patent infringement concerning several of its physical vapor deposition, or PVD, patents (the Applied Patents). On June 23, 1997, we sued Applied in the United States District Court for the Northern District of California, claiming infringement by Applied of several of our PVD patents acquired from Varian in the TFS business acquisition. On July 7, 1997, Applied amended its complaint in its suit against Varian to add Novellus as a defendant. We requested that the Court dismiss us as a defendant in this suit.

The relief requested by Applied in both suits included a permanent injunction against future infringement, damages for alleged past infringement and treble damages for alleged willful infringement. Trial had been set to commence on September 20, 2004.

#### *Settlement*

Under the terms of the MOU, all then pending patent litigation between us and Applied was dismissed with prejudice. As part of the settlement, Applied agreed to pay us \$8.0 million and released us from all amounts owed or claimed to be owed as of September 3, 2004 under a previous Settlement Agreement between us dated May 4, 1997 (TEOS Agreement), including Applied's claim that \$3.5 million was owed by us. In addition, the MOU effected a change in the terms of settlement under the TEOS Agreement to cause the license by Applied of U.S. Patent No. 5,362,526 to us, and the cross-license of our CVD Patents and the Applied CVD Patents (each as defined in the TEOS Agreement), in each case to be fully-paid and royalty-free, except in limited circumstances. The MOU also effected a change in the terms of settlement under the TEOS Agreement to eliminate all rights of Applied to terminate the license based upon Novellus' merger or acquisition of or by other entities.

Under the MOU, the parties also agreed to covenants not to sue each other for specified periods, as well as notice and cure periods, each of which limits the ability of the parties to bring patent infringement claims against the other and the other's customers, suppliers and distributors, regarding products existing at September 3, 2004 and new products, subject to certain exceptions in specified product areas and for certain suppliers to the parties. The MOU also provides a general release of the patent claims covered by the MOU for periods prior to September 3, 2004. Neither party admitted any liability in connection with the settlement.

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 13. Litigation (Continued)**

The current year results include the cash receipt of \$8.0 million and the reversal of \$8.1 million previously accrued as a result of the settlement of litigation with Applied Materials, Inc.

*Semitool, Inc.*

On October 11, 2004, we settled the pending patent litigation with Semitool, Inc. pursuant to the terms of a settlement agreement effective October 8, 2004.

*Background of the Litigation*

On June 11, 2001, Semitool sued us for patent infringement in the United States District Court for the District of Oregon. Semitool alleged that we infringed one of Semitool's patents related to copper electroplating. Semitool sought an injunction against future infringement, damages for past infringement, and treble damages for alleged willful infringement. On November 13, 2001, we countersued Semitool for patent infringement in the United States District Court for the District of Oregon. We alleged that Semitool infringed certain of our patents related to copper electroplating. We sought an injunction against Semitool, damages for past infringement, and treble damages for willful infringement by Semitool.

*Settlement*

On October 11, 2004, we entered into a settlement agreement with Semitool that resolves all patent infringement claims at issue between us and Semitool. We made a \$2.9 million settlement payment to Semitool in accordance with the terms of the settlement agreement. In addition, we agreed to covenants not to sue Semitool for infringement of the four counterclaim patents we asserted in the litigation based on acts prior to or after October 8, 2004 and Semitool agreed to a covenant not to sue us for infringement of the patent Semitool asserted in the litigation. This covenant not to sue is limited to the activities where Semitool accused us of infringement prior to October 8, 2004. The settlement agreement does not include any license of either party's patents. Neither party admitted any liability in connection with the settlement.

*Plasma Physics Corporation and Solar Physics Corporation*

On June 14, 2002, certain of our present and former customers — including Agilent Technologies, Inc., Micron Technology, Inc., Agere Systems, Inc., National Semiconductor Corporation, Koninklijke Philips Electronics N.V., Texas Instruments, Inc., ST Microelectronics, Inc., LSI Logic Corporation, International Business Machines Corporation, Conexant Systems, Inc., Motorola, Inc., Advanced Micro Devices, Inc. and Analog Devices Inc. — were sued for patent infringement by Plasma Physics Corporation and Solar Physics Corporation. We have not been sued by Plasma Physics, Solar Physics, or any other party for infringement of any Plasma Physics or Solar Physics patent. Certain defendants in the case, however, contend that we allegedly have indemnification obligations and liability relating to these lawsuits. We believe that these matters will not have a material adverse impact on our business, financial condition, or results of operations. There can be no assurance, however, that Novellus would prevail in a future lawsuit filed in connection with the alleged indemnification obligations, if such a lawsuit were brought. If one or more parties were to prevail against us in such a suit and damages were awarded, the adverse impact on our business, financial condition, or results of operations could be material. However, due to the uncertainty surrounding the litigation process, we are unable to estimate a range of loss, if any, at this time.

*Linear Technology Corporation*

In March, 2002, Linear Technology Corporation (Linear) filed a complaint against Novellus, among other parties, in the Superior Court of the State of California for the County of Santa Clara. The complaint seeks damages (including punitive damages) and injunctions for causes of actions involving alleged breach of contract, fraud, unfair competition, breach of warranty and declaratory relief. On September 3, 2004, Novellus filed a demurrer to all causes of action in the complaint, which the Court granted without leave to amend on October 5, 2004. On January 19, 2005, we received notice that Linear intends to appeal the court's order granting judgment in favor of Novellus. Although we prevailed

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 13. Litigation (Continued)**

on these claims in the Superior Court, it is possible that the Court of Appeals will reverse the ruling of the Superior Court, in which case Novellus could face potential liability on these claims. We cannot predict how the Court of Appeals will rule on this issue or, if it does rule against Novellus, estimate a range of potential loss, if any, due to the uncertainty of the litigation process.

***Employment Litigation***

On April 4, 2003, Thomas Graziani and others filed a class action lawsuit against Novellus in the United States District Court for the District of Oregon. On August 1, 2003, David Robinson and others filed a class action lawsuit against Novellus in the United States District Court for the Northern District of California, San Jose Division. Both lawsuits sought collective and/or class action status for field service engineers who work for Novellus and both lawsuits allege that field service engineers are entitled to compensatory damages in the form of overtime pay, liquidated damages, interest and attorneys' fees and costs. At a mediation held on March 1, 2004, the parties to both lawsuits agreed to a settlement to be documented on or before April 2, 2004. Subsequently, the parties have agreed to the material terms of a settlement, including a cap on exposure to Novellus of \$2.5 million. On May 3, 2004, a fully executed agreement resolving these matters was filed with the United States District Court for the Northern District of California. The court approved the settlement on June 7, 2004. Novellus recorded a charge of \$2.5 million during 2004 related to the settlement.

***Other Litigation***

We are a defendant or plaintiff in various actions that arose in the normal course of business. We believe that the ultimate disposition of these matters will not have a material adverse effect on our business, financial condition or results of operations. However, due to the uncertainty surrounding the litigation process, we are unable to estimate a range of loss, if any, at this time.

**Note 14. Income Taxes**

Significant components of the provision (benefit) for income taxes attributable to income (loss) before income taxes and cumulative effect of a change in accounting principle are as follows (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
Federal			
Current.....	\$ 13,611	\$ 7,270	\$ (41,842)
Deferred .....	<u>29,067</u>	<u>(30,046)</u>	<u>19,346</u>
	42,678	(22,776)	(22,496)
State			
Current.....	1,036	405	377
Deferred .....	<u>7,438</u>	<u>(5,230)</u>	<u>(8,853)</u>
	8,474	(4,825)	(8,476)
Foreign			
Current.....	15,349	17,315	11,544
Income tax benefits attributable to employee stock plan activity allocated to shareholders' equity.....	<u>—</u>	<u>—</u>	<u>19,428</u>
Total provision (benefit) for income taxes .....	<u>\$ 66,501</u>	<u>\$ (10,286)</u>	<u>\$ —</u>

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 14. Income Taxes (Continued)**

Income (loss) before income taxes and cumulative effect of a change in accounting principle consisted of the following (in thousands):

	Years Ended December 31,		
	2004	2003	2002
Domestic .....	\$ 188,938	\$ (66,744)	\$ 4,699
Foreign .....	34,253	51,424	18,221
Total .....	<u>\$ 223,191</u>	<u>\$ (15,320)</u>	<u>\$ 22,920</u>

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets and liabilities are as follows (in thousands):

	December 31,	
	2004	2003
Deferred tax assets:		
Reserves and accruals .....	\$ 46,805	\$ 50,022
Expenses not currently deductible .....	53,654	37,836
Capitalized in-process research and development .....	40,002	26,577
Deferred profit .....	33,948	19,937
Net operating loss carryforwards .....	46,387	108,413
Credits .....	57,567	47,026
Other .....	5,951	10,678
Total deferred tax assets .....	284,314	300,489
Valuation allowance .....	(80,281)	(76,510)
Deferred tax assets, net of valuation allowance .....	204,033	223,979
Deferred tax liabilities:		
Depreciation .....	(67,168)	(55,440)
Acquisition related items .....	(10,514)	—
Total net deferred tax assets .....	<u>\$ 126,351</u>	<u>\$ 168,539</u>

The net increase in the valuation allowance was \$3.8 million, \$19.5 million and \$49.4 million during the years ended December 31, 2004, 2003 and 2002, respectively. The valuation allowance balance at December 31, 2004 includes \$44.0 million related to the acquired deferred tax assets of SpeedFam-IPEC which will be credited to goodwill when realized and \$32.9 million related to stock option benefits that will be credited to equity when and if realized.

As of December 31, 2004, we had federal and state tax credit carryforwards of approximately \$38.8 million and \$18.7 million, respectively. These credits include foreign tax credits for which a valuation allowance has been provided to the extent that they may not be utilized. The federal tax credit carryforwards expire at various dates beginning in 2012 through 2024, if not utilized. The state tax credit carries forward indefinitely.

As of December 31, 2004, our federal net operating losses for tax return purposes were \$126.6 million. A valuation allowance has been provided to the extent that we believe that the losses may not be utilized in future periods due to the limitations of Internal Revenue Code Section 382. If not utilized, these carryforwards will start to expire in 2017.

The provision (benefit) for income taxes differs from the provision calculated by applying the federal statutory tax rate to income (loss) before income taxes and cumulative effect of a change in accounting principle because of the following (in thousands):

# NOVELLUS SYSTEMS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

### Note 14. Income Taxes (Continued)

	Years Ended December 31,		
	2004	2003	2002
Expected provision at 35% .....	\$ 78,117	\$ (5,362)	\$ 8,022
State tax, net of federal benefit .....	5,508	(3,136)	(3,975)
Research and development credits .....	(1,309)	(2,000)	(5,144)
Export sales incentive .....	(9,781)	—	(1,199)
Valuation allowance increase (decrease) .....	(8,827)	322	(3,100)
Write-off of acquired IPR&D .....	2,143	—	3,151
Other .....	650	(110)	2,245
Total provision (benefit) for income taxes .....	<u>\$ 66,501</u>	<u>\$ (10,286)</u>	<u>\$ —</u>

We received a notification from the Internal Revenue Service that a settlement agreement with respect to tax years through 2002 has been proposed and is pending with the Congressional Joint Committee on Taxation. In addition, certain of our foreign subsidiaries are subject to examination by the foreign taxing authorities. The timing of the settlement of these examinations is uncertain. We believe that adequate accruals have been provided for any potential adjustments that may result from these examinations.

On October 22, 2004, the American Jobs Creation Act of 2004 was enacted into law. The Act provided for a special one-time 85% dividends received deduction on certain foreign earnings repatriated, as defined in the Act. The deduction could result in an approximate 5.25% federal tax rate on repatriated foreign earnings, if we elect to apply this provision to qualifying earnings repatriation.

We are in the process of evaluating the effects of utilization of the repatriation provisions pending issuance of further regulatory guidance regarding certain provisions of the Act. We believe that we will be able to complete our evaluation of the effects of the repatriation provision by the third or fourth quarter of fiscal 2005. We have previously been subject to US tax at a 35% tax rate on approximately \$44.0 million of foreign earnings. While we would benefit from the reduced 5.25% tax rate if we repatriate some or all of these earnings under the Act, we would also lose the ability to benefit from foreign tax credits otherwise available with respect to such earnings. Accordingly, we are unable to estimate the net impact of the Act now, although it is unlikely to be significant.

### Note 15. Shareholders' Equity

#### *Other Comprehensive Income*

The components of accumulated other comprehensive income, net of related taxes are as follows (in thousands):

	December 31,	
	2004	2003
Foreign currency translation adjustments, net of tax of \$4,194 and \$0 .....	\$ 6,232	\$ 4,685
Unrealized loss on available-for-sale securities .....	(987)	(113)
Accumulated other comprehensive income .....	<u>\$ 5,245</u>	<u>\$ 4,572</u>

#### *Common Stock Repurchase Program*

On September 19, 2001, our Board of Directors authorized a stock repurchase program of up to \$500 million over the next two years. As of September 19, 2003, the end of the repurchase program, 3.2 million shares, or \$79.5 million of common stock, had been repurchased.

On February 24, 2004, we announced that our Board of Directors had approved a stock repurchase plan that authorized the repurchase of up to \$500.0 million of our outstanding common stock through February 13, 2007. On September 20, 2004 we announced that our Board of Directors had authorized an additional \$1.0 billion for



**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 15. Shareholders' Equity (Continued)**

repurchase of our outstanding common stock through September 14, 2009. As of December 31, 2004, 14.8 million shares had been repurchased under this plan at a weighted average purchase price of \$27.76.

**Note 16. Employee Benefit Plans**

*Employee Stock Option Plans*

We grant options to employees under several stock option plans. Under the 1992 Stock Option Plan, which expired in fiscal 2002, options to purchase up to 33,300,000 shares of Novellus' common stock were made available for grant at not less than fair market value. In May 2001, our shareholders approved the 2001 Stock Incentive Plan, the terms of which reserve 6,360,000 shares of common stock for future issuance. In December 2001, the Board of Directors approved the reservation of 6,000,000 shares of common stock for future issuance under the 2001 Non-Qualified Option Plan. In 2002, an additional 4,500,000 shares of common stock were reserved for future issuance under the 2001 Non-Qualified Option Plan. Options generally vest ratably over a four-year period on the anniversary of the date of grant or as determined by the Board of Directors. Stock options expire ten years after the date of grant.

Pursuant to the terms of the SpeedFam-IPEC acquisition agreement, we assumed SpeedFam-IPEC's 1991 Employee Incentive Stock Option Plan, 1992 Stock Option Plan, 1995 Stock Plan, 2001 Non-statutory Stock Option Plan and Stand-Alone Non-statutory Stock Option Agreement. These plans accounted for approximately 1,675,000 shares of common stock, of which 530,000 had not been granted as of the acquisition date of December 6, 2002. These shares have been included in the stock option and restricted stock activity table presented below.

During 2004, the Company granted 250,000 stock options and 50,000 shares of restricted stock under an inducement grant. The shares subject to the stock option grant vest over a four-year period. The restricted stock vests over a five-year period. New employee inducement grants represent incremental amounts available for grant and are not subject to shareholder approval. These shares have been included in the stock option and restricted stock activity table presented below.

Information with respect to stock option and restricted stock activity is as follows (share data in thousands):

	Shares Available for Grant	Options Outstanding		Restricted Stock	
		Number of Shares	Weighted- Average Exercise Price	Number of Shares	Weighted- Average FMV at Grant
Balances at December 31, 2001 .....	9,174	22,559	\$ 29.04	163	\$ 28.23
Additional authorization .....	4,500	—	—	—	—
Assumption of					
SpeedFam-IPEC options .....	530	1,145	\$ 42.85	—	—
Granted .....	(6,292)	6,192	\$ 33.34	100	\$ 29.24
Exercised .....	—	(2,385)	\$ 15.23	—	—
Canceled .....	942	(1,455)	\$ 36.58	(16)	\$ 26.69
Vested restricted stock .....	—	—	—	(20)	\$ 25.56
Balances at December 31, 2002 .....	8,854	26,056	\$ 31.16	227	\$ 29.02
Granted .....	(3,966)	3,841	\$ 38.94	125	\$ 38.65
Exercised .....	—	(3,015)	\$ 18.70	—	—
Canceled .....	1,148	(1,584)	\$ 45.82	(4)	\$ 29.24
Vested restricted stock .....	—	—	—	(99)	\$ 25.56
Balances at December 31, 2003 .....	6,036	25,298	\$ 32.80	249	\$ 35.22
New plan .....	300	—	—	—	—
Granted .....	(5,850)	5,339	\$ 29.02	511	\$ 30.69
Exercised .....	—	(1,292)	\$ 20.13	—	—
Canceled .....	1,726	(2,640)	\$ 36.06	(62)	\$ 36.39
Vested restricted stock .....	—	—	—	(10)	\$ 36.50
Balances at December 31, 2004 .....	<u>2,212</u>	<u>26,705</u>	\$ 32.40	<u>688</u>	\$ 31.73

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 16. Employee Benefit Plans (Continued)**

There were approximately 976,000 shares, 440,000 shares and 529,000 shares cancelled due to employee terminations that were restricted from being returned to the plan for future issuance during the years ended December 31, 2004, 2003 and 2002, respectively.

Stock options outstanding as of December 31, 2004 are summarized below (share data in thousands):

Options Outstanding				Options Exercisable	
Range of Exercise Prices	Options Outstanding at December 31, 2004	Weighted- Average Remaining Contractual Life (years)	Weighted- Average Exercise Price	Options Exercisable at December 31, 2004	Weighted- Average Exercise Price
\$ 5.89 to \$ 25.56	4,855	4.23	\$ 19.89	4,745	\$ 19.83
\$ 25.56 to \$ 28.46	3,627	9.38	\$ 27.42	412	\$ 27.57
\$ 28.76 to \$ 30.25	6,203	7.30	\$ 29.62	4,013	\$ 29.80
\$ 30.77 to \$ 40.43	6,853	7.55	\$ 36.53	3,812	\$ 38.04
\$ 40.69 to \$ 253.71	<u>5,167</u>	7.42	\$ 45.51	<u>2,665</u>	\$ 48.36
\$ 5.89 to \$ 253.71	<u>26,705</u>	7.11	\$ 32.40	<u>15,647</u>	\$ 31.89

The range of option exercise prices for options outstanding at December 31, 2004 is wide, primarily due to the impact of assumed options of acquired companies that had experienced significant price fluctuations.

***Restricted Stock and Deferred Compensation***

We award restricted stock to our employees from our 1992 Stock Option Plan and our 2001 Stock Incentive Plan, collectively referred to as the Plans. We awarded a total of approximately 511,000 shares of common stock under the Plans during the year ended December 31, 2004. Our restricted stock normally vests ratably or on a cliff basis over four or five years and is subject to forfeiture if employment terminates prior to vesting. Approximately 688,000 shares of restricted common stock remain subject to vesting requirements as of December 31, 2004. Deferred compensation is recorded based on the market value of the restricted shares at grant and is presented as a reduction of shareholders' equity in our consolidated balance sheets. Deferred compensation is amortized as compensation expense over the vesting period, using the graded-vesting method. Approximately \$3.9 million, \$1.9 million, and \$1.7 million was recorded as amortization expense related to restricted stock issuances for the years ended December 31, 2004, 2003 and 2002, respectively.

In connection with the acquisition of SpeedFam-IPEC on December 6, 2002, we recorded deferred compensation of \$3.1 million for the intrinsic value of unvested stock options we assumed. Approximately 328,000 shares of unvested stock options were assumed at the acquisition date. These stock options had exercise prices ranging from \$11.22 to \$324.53 per share, a weighted-average exercise price of \$42.85, and a weighted-average contractual life of five years. The deferred compensation is presented as a reduction of shareholders' equity in our consolidated balance sheets and is being amortized as compensation expense over the remaining vesting period, using the graded-vesting method. For the years ended December 31, 2004 and 2003, approximately \$0.2 million and \$1.4 million, respectively, was recorded as amortization expense related to these stock options.

***Employee Stock Purchase Plans***

In December 1988 and May 1992, we adopted qualified Employee Stock Purchase Plans, referred to herein as the Purchase Plans, under Sections 421 and 423 of the Internal Revenue Code. Under the Purchase Plans, qualified employees are entitled to purchase shares at 85% of the fair market value on specified dates. There were approximately 364,000, 557,000 and 366,000 shares issued under the Purchase Plans in 2004, 2003 and 2002, respectively. As of December 31, 2004, approximately 341,000 shares were reserved for future issuance under the Purchase Plans.

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 16. Employee Benefit Plans (Continued)**

*Employee Savings and Retirement Plan*

We maintain a 401(k) retirement savings plan for our full-time employees. Participants in the 401(k) plan may contribute up to 100% of their eligible pre-tax compensation, limited by the maximum dollar amount allowed by the Internal Revenue Code. We contribute a percentage of each participating employee's salary deferral contributions up to a maximum of \$2,000, or 3% of an employee's annual compensation, whichever is greater. Our matching contributions are invested in Novellus common stock and become fully vested at the end of the employee's third year of service. We recorded \$4.0 million, \$3.5 million and \$3.6 million of expense in connection with matching contributions under the 401(k) plan for the years ended December 31, 2004, 2003 and 2002, respectively.

*Deferred Compensation Plan*

Under the Deferred Compensation Plan, certain employees may elect to defer a portion of their earnings. Amounts payable under the Deferred Compensation Plan totaled \$6.0 million and \$4.7 million at December 31, 2004 and 2003, respectively.

*Profit Sharing*

Profit sharing is awarded to employees based upon the Company's performance against certain financial and operating goals. Distributions to employees are made annually based upon a percentage of base salary, provided that a threshold level of financial and performance goals are met. Charges to expense under the profit sharing plans were \$33.5 million, \$1.9 million and \$9.3 million for the years ended December 31, 2004, 2003 and 2002, respectively.

*Defined Benefit Pension Plan*

In connection with our acquisition of Peter Wolters AG on June 28, 2004, we assumed the obligation of its defined benefit pension plan covering substantially all eligible Peter Wolters employees. Benefits under the plan are based on years of service and compensation levels. The terms of the plan and local statutory requirements do not require the plan to be funded. The projected benefit obligation at the acquisition date was \$6.4 million. The accumulated benefit obligation is approximately equal to the projected benefit obligation at December 31, 2004. We maintain a liability for the unfunded obligation under the pension plan. The changes in the obligation consisted of interest cost, service cost, benefit payments and currency translation adjustments, which were not significant. At December 31, 2004, the projected benefit obligation was \$7.0 million. Our estimated benefit payments for each of the next ten fiscal years will be approximately \$0.5 million per year in 2005 through 2009, and an aggregate of \$2.6 million for years 2010 through 2014.

At December 31, 2004, the weighted-average actuarial assumptions used to determine the projected benefit obligation, the accumulated benefit obligation and net period benefit costs, as applicable, are as follows:

Discount rate .....	5.30%
Salary increase rate .....	2.00%

**Note 17. Operating Segments**

We operate primarily in one segment, the manufacturing, marketing and servicing of semiconductor equipment for thin film deposition, surface preparation and chemical mechanical planarization. This operating segment is referred to as the Semiconductor Group. In accordance with SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information," our chief operating decision-maker is the Chairman and Chief Executive Officer. All semiconductor-related operating units qualify for aggregation under SFAS No. 131, due to their customer base and similarities in economic characteristics, nature of products and services, and process for procurement, manufacturing and distribution processes. In the third quarter of 2004, we acquired Peter Wolters AG. Due to the diversity of Peter Wolters' existing product lines and customer base from the Semiconductor Group, we have determined that the qualitative thresholds required for aggregation under SFAS No. 131 have not been

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 17. Operating Segments (Continued)**

met. As a result, we have included a new segment in our disclosures for the year ended December 31, 2004. This segment is referred to as the Industrial Applications Group. This segment had no reportable activity prior to the acquisition of Peter Wolters. Since we primarily operated in one segment, with one group of similar products and services prior to 2004, all financial segment and product line information required by SFAS No. 131 prior to 2004 can be found in the Consolidated Financial Statements.

Our Semiconductor Group develops, manufactures, sells and supports equipment used in the fabrication of integrated circuits, commonly called microchips, or chips. Our Industrial Applications Group is a supplier of lapping, grinding, polishing and deburring products for fine-surface optimization.

	<u>Semiconductor Group</u>	<u>Industrial Applications Group</u>	<u>Consolidated</u>
<b>2004</b>			
Sales to unaffiliated customers .....	\$ 1,299,918	\$ 57,370	\$ 1,357,288
Sales between reportable operating segments .....	—	—	—
Total net sales .....	<u>\$ 1,299,918</u>	<u>\$ 57,370</u>	<u>\$ 1,357,288</u>
Operating income .....	<u>\$ 204,569</u>	<u>\$ 818</u>	<u>\$ 205,387</u>
Long-lived assets .....	\$ 456,023	\$ 20,469	\$ 476,492
All other identifiable assets .....	<u>1,721,646</u>	<u>203,694</u>	<u>1,925,340</u>
Total assets .....	<u>\$ 2,177,669</u>	<u>\$ 224,163</u>	<u>\$ 2,401,832</u>

For the year ended December 31, 2004, three customers each accounted for 10% of our net sales. For the year ended December 31, 2003, two customers accounted for 27% and 12% of our system sales, respectively. For the year ended December 31, 2002, four customers accounted for 17%, 11%, 11% and 10% of our system sales, respectively. All such customer concentration is contained exclusively within the Semiconductor Group.

For geographical reporting, revenues are attributed to the geographic location in which our subsidiaries are located. Long-lived property, plant and equipment, goodwill and other intangible assets are attributed to the geographic location in which the assets are located.

The following is a summary of operations by geographic area (in thousands):

	<u>North America</u>	<u>Europe</u>	<u>Asia</u>	<u>Elimination</u>	<u>Consolidated</u>
<b>2004</b>					
Sales to unaffiliated customers .....	\$ 1,051,553	\$ 47,661	\$ 258,074	\$ —	\$ 1,357,288
Transfers between geographic locations .....	<u>134,013</u>	<u>24,369</u>	<u>36,966</u>	<u>(195,348)</u>	<u>—</u>
Total net sales .....	<u>\$ 1,185,566</u>	<u>\$ 72,030</u>	<u>\$ 295,040</u>	<u>\$(195,348)</u>	<u>\$ 1,357,288</u>
Operating income .....	<u>\$ 164,106</u>	<u>\$ 4,060</u>	<u>\$ 37,221</u>	<u>\$ —</u>	<u>\$ 205,387</u>
Long-lived assets .....	\$ 455,218	\$ 18,794	\$ 2,480	\$ —	\$ 476,492
All other identifiable assets .....	<u>1,561,672</u>	<u>195,957</u>	<u>167,711</u>	<u>—</u>	<u>1,925,340</u>
Total assets .....	<u>\$ 2,016,890</u>	<u>\$ 214,751</u>	<u>\$ 170,191</u>	<u>\$ —</u>	<u>\$ 2,401,832</u>

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 17. Operating Segments (Continued)**

	<u>North America</u>	<u>Europe</u>	<u>Asia</u>	<u>Elimination</u>	<u>Consolidated</u>
<b>2003</b>					
Sales to unaffiliated customers.....	\$ 729,998	\$ 24,965	\$ 170,107	\$ —	\$ 925,070
Transfers between geographic locations .....	42,217	17,828	39,312	(99,357)	—
Total net sales.....	<u>\$ 772,215</u>	<u>\$ 42,793</u>	<u>\$ 209,419</u>	<u>\$ (99,357)</u>	<u>\$ 925,070</u>
Operating income (loss) .....	<u>\$ (81,960)</u>	<u>\$ 3,608</u>	<u>\$ 46,766</u>	<u>\$ —</u>	<u>\$ (31,586)</u>
Long-lived assets .....	\$ 503,952	\$ 915	\$ 1,700	\$ —	\$ 506,567
All other identifiable assets .....	1,690,927	24,081	117,325	—	1,832,333
Total assets.....	<u>\$ 2,194,879</u>	<u>\$ 24,996</u>	<u>\$ 119,025</u>	<u>\$ —</u>	<u>\$ 2,338,900</u>
	<u>North America</u>	<u>Europe</u>	<u>Asia</u>	<u>Elimination</u>	<u>Consolidated</u>
<b>2002</b>					
Sales to unaffiliated customers.....	\$ 719,957	\$ 8,031	\$ 111,970	\$ —	\$ 839,958
Transfers between geographic locations .....	14,349	13,898	33,665	(61,912)	—
Total net sales.....	<u>\$ 734,306</u>	<u>\$ 21,929</u>	<u>\$ 145,635</u>	<u>\$ (61,912)</u>	<u>\$ 839,958</u>
Operating income.....	<u>\$ (47,548)</u>	<u>\$ 37,017</u>	<u>\$ 4,730</u>	<u>\$ —</u>	<u>\$ (5,801)</u>
Long-lived assets .....	\$ 175,095	\$ 3,815	\$ 1,016	\$ —	\$ 179,926
All other identifiable assets .....	2,190,365	15,717	107,986	—	2,314,068
Total assets.....	<u>\$ 2,365,460</u>	<u>\$ 19,532</u>	<u>\$ 109,002</u>	<u>\$ —</u>	<u>\$ 2,493,994</u>

Revenue for each geographic area is recognized from the locations within a designated geographic region in accordance with SAB 104, which superseded the earlier related guidance in SAB 101. Transfers and commission arrangements between geographic areas are at prices sufficient to recover a reasonable profit.

**Note 18. Bad Debt Recovery**

In September 2001, we determined that due to the financial difficulties facing one of our customers, an outstanding accounts receivable balance was at risk for collection. Accordingly, we recorded a write-off of \$7.7 million. In the first quarter of 2002, all amounts under this accounts receivable balance were paid, resulting in a recovery of \$7.7 million.

**Note 19. Related Party Transactions**

In March 2002, we began leasing an aircraft from NVLS I, LLC, a third-party entity wholly owned by Richard S. Hill, our Chairman and Chief Executive Officer. Under the aircraft lease agreement, we incurred lease expense of \$0.9 million, \$0.8 million and \$0.2 million for the years ended December 31, 2004, 2003 and 2002, respectively.

Mr. Hill is a member of the Board of Directors of the University of Illinois Foundation. Novellus regularly provides research funding to certain groups, including the University of Illinois. Novellus provided research grants to the University of Illinois and certain of its professors in the amount of \$0.1 million in each of the years ended December 31, 2004, 2003 and 2002. Mr. Hill is also a member of the Board of Directors of LTX Corporation. We recorded sublease income from LTX Corporation of approximately \$1.4 million, \$1.4 million and \$1.1 million for the years ended December 31, 2004, 2003 and 2002, respectively.

D. James Guzy, a member of our Board of Directors until April 16, 2004, was also a member of the Board of Directors of Intel Corporation, which is one of our significant customers. Intel Corporation represented approximately 10%, 12% and 11% of net sales for the years ended December 31, 2004, 2003 and 2002, respectively. Intel Corporation also accounted for 8% and 6% of our accounts receivable as of December 31, 2004 and 2003, respectively.

**NOVELLUS SYSTEMS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note 19. Related Party Transactions (Continued)**

During each of the years ended December 31, 2004, 2003 and 2002, Novellus employed, in non-executive positions, three immediate family members of our executive officers. The aggregate compensation amounts recognized for these immediate family members during the years ended December 31, 2004, 2003 and 2002 were \$0.5 million, \$0.5 million and \$0.4 million, respectively.

From time to time we have made secured and unsecured relocation loans to our executive officers, vice presidents and other key personnel. As of December 31, 2004, we do not have any outstanding loans to our "executive officers," as defined by the Securities and Exchange Commission. However, we do have outstanding loans to certain non-executive vice presidents and other key personnel. As of December 31, 2004 and 2003, the total outstanding balance of loans to non-executive vice presidents and other key personnel was approximately \$5.0 million and \$5.7 million, respectively. Of the amount outstanding at December 31, 2004, \$3.8 million was secured by collateral. Excluding relocation loans, all other loans bear interest. We have not realized material bad debts related to the loans to our personnel.

**Note 20. Quarterly Financial Data (Unaudited)**

	Quarter Ended			
	March 27, 2004 <sup>(1)</sup>	June 26, 2004 <sup>(2)</sup>	September 25, 2004 <sup>(3)</sup>	December 31, 2004 <sup>(4)</sup>
	(In thousands, except per share data)			
Net sales.....	\$ 262,862	\$ 338,219	\$ 415,935	\$ 340,272
Gross profit.....	\$ 124,605	\$ 169,680	\$ 201,111	\$ 169,734
Net income.....	\$ 16,681	\$ 37,811	\$ 64,662	\$ 37,536
Basic and diluted net income per share.....	\$ 0.11	\$ 0.25	\$ 0.45	\$ 0.27
Shares used in basic per share calculations.....	152,911	149,112	142,333	139,466
Shares used in diluted per share calculations.....	156,100	151,386	143,574	140,687

	Quarter Ended			
	March 29, 2003	June 28, 2003	September 27, 2003 <sup>(5)</sup>	December 31, 2003
	(In thousands, except per share data)			
Net sales.....	\$ 238,410	\$ 239,050	\$ 221,099	\$ 226,511
Gross profit.....	\$ 109,814	\$ 105,322	\$ 58,776	\$ 106,088
Net income (loss) before cumulative effect of a change in accounting principle.....	\$ 11,872	\$ 7,430	\$ (34,788)	\$ 10,452
Cumulative effect of change in accounting principle ..	—	—	\$ (62,780)	—
Net income (loss).....	\$ 11,872	\$ 7,430	\$ (97,568)	\$ 10,452
Basic and diluted net income (loss) per share before cumulative effect of a change in accounting principle.....	\$ 0.08	\$ 0.05	\$ (0.22)	\$ 0.07
Cumulative effect of change in accounting principle ...	—	—	\$ (0.42)	—
Basic and diluted net income (loss) per share.....	\$ 0.08	\$ 0.05	\$ (0.64)	\$ 0.07
Shares used in basic per share calculations.....	149,434	149,950	151,280	152,057
Shares used in diluted per share calculations.....	152,229	153,034	151,280	156,580

- (1) The first quarter 2004 results include a charge of \$2.5 million related to the settlement of an overtime class action lawsuit by field service engineers and a pre-tax benefit to cost of sales of approximately \$0.9 million for the sale of inventory previously reserved.
- (2) The second quarter 2004 results include a charge totaling \$6.1 million for acquired in-process research and development in connection with the acquisition of Angstrom Systems, Inc. and a pre-tax benefit to cost of sales of approximately \$3.6 million for the sale of inventory previously reserved.

NOVELLUS SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**Note 20. Quarterly Financial Data (Unaudited) (Continued)**

- (3) The third quarter 2004 results included a cash receipt of \$8.0 million, and the reversal of \$8.1 million in previously accrued royalty payments, as a result of the settlement of litigation with Applied Materials, Inc. The third quarter 2004 results also included a pre-tax charge of \$2.9 million related to the settlement of litigation with Semitool, Inc., the reversal of a previously recorded restructuring accrual of \$0.9 million and a pre-tax benefit to cost of sales of approximately \$2.8 million for the sale of inventory previously reserved.
- (4) The fourth quarter results include restructuring and other charges of \$2.4 million and the pre-tax benefit to cost of sales of approximately \$1.7 million for the sale of inventory previously reserved.
- (5) The third quarter 2003 results include restructuring and other charges of \$62.5 million and a non-cash charge of \$62.8 million, net of tax, as a cumulative effect of a change in accounting principle from the consolidation of properties previously accounted for as synthetic leases.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
ON CONSOLIDATED FINANCIAL STATEMENTS**

**The Board of Directors and Shareholders of Novellus Systems, Inc.**

We have audited the accompanying consolidated balance sheets of Novellus Systems, Inc. as of December 31, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. Our audits also included the financial statement schedule listed in the index at Item 15(a)(2). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Novellus Systems, Inc. at December 31, 2004 and 2003 and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 12 to the consolidated financial statements, in 2003 Novellus changed its method of accounting for synthetic leases in accordance with FASB Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51."

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Novellus Systems, Inc.'s internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 11, 2005 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Jose, California  
March 11, 2005



## **Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting**

### **The Board of Directors and Shareholders of Novellus Systems, Inc.**

We have audited management's assessment, included in the accompanying Management Report on Internal Control over Financial Reporting, that Novellus Systems, Inc. (the Company) maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As indicated in the accompanying Management Report on Internal Control over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Peter Wolters AG, which is included in the 2004 consolidated financial statements of the Company and constituted 8.8% of total assets as of December 31, 2004 and 3.0% of net sales for the year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Peter Wolters AG.

In our opinion, management's assessment that Novellus Systems, Inc. maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Novellus Systems, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on the COSO criteria.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Novellus Systems, Inc. as of December 31, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2004 of Novellus Systems, Inc. and our report dated March 11, 2005 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Jose, California  
March 11, 2005

## **Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

Not applicable.

### **Item 9A. *Controls and Procedures***

Attached as exhibits to this Annual Report on Form 10-K are certifications of our Chief Executive Officer (CEO) and Chief Financial Officer (CFO), which are required pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). This "Controls and Procedures" section of this Annual Report on Form 10-K includes information concerning the controls and controls evaluation referenced in the certifications. The report of Ernst & Young LLP, our independent registered public accounting firm, is set forth at the end of Part II, Item 8 of this Annual Report on Form 10-K. This report addresses Ernst & Young LLP's audit of our internal control over financial reporting and of management's assessment of internal control over financial reporting set forth below. This section of the Annual Report on Form 10-K should be read in conjunction with the certifications and the report of Ernst & Young LLP for a more complete understanding of the matters presented.

#### **Evaluation of Disclosure Controls**

We evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. This controls evaluation was performed under the supervision and with the participation of management, including our CEO and CFO. Disclosure controls are procedures that are designed to ensure that information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, or the Exchange Act, such as this Annual Report on Form 10-K, is recorded, processed, summarized and reported within the time periods specified by the Securities and Exchange Commission, or the SEC. Disclosure controls are also designed to ensure that such information is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Our quarterly evaluation of disclosure controls includes an evaluation of some components of our internal control over financial reporting. We also perform a separate annual evaluation of internal control over financial reporting for the purpose of providing the management report below.

The evaluation of our disclosure controls included a review of their objectives and design, the Company's implementation of the controls and the effect of the controls on the information generated for use in this Annual Report on Form 10-K. In the course of the controls evaluation, we reviewed identified data errors or control problems and sought to confirm that appropriate corrective actions, including process improvements, were being undertaken. This type of evaluation is performed on a quarterly basis so that the conclusions of management, including the CEO and CFO, concerning the effectiveness of the disclosure controls can be reported in our periodic reports on Form 10-Q and Form 10-K. Many of the components of our disclosure controls are also evaluated on an ongoing basis by both our internal audit and finance organizations. The overall goals of these various evaluation activities are to monitor our disclosure controls and to modify them as necessary. We intend to maintain the disclosure controls as dynamic systems that we adjust as circumstances merit.

Based on the controls evaluation, our CEO and CFO have concluded that, subject to the limitations noted in this Part II, Item 9A, as of the end of the period covered by this Form 10-K, our disclosure controls were effective to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified by the SEC, and that material information relating to the Company is made known to management, including the CEO and the CFO, particularly during the time when our periodic reports are being prepared.

#### **Management Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2004 based on the guidelines established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). We have excluded from our evaluation the internal control over financial reporting of Peter

Wolters AG, which we acquired on June 28, 2004. As of and for the year ended December 31, 2004, total assets and net sales of Peter Wolters AG represented 8.8% and 3.0% of consolidated net sales and total assets, respectively. Based on the results of our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2004 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles.

Management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2004 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included at the end of Part II, Item 8 of this Annual Report on Form 10-K.

#### **Limitations on Effectiveness of Controls**

The company's management, including the CEO and CFO, do not expect that our disclosure controls or our internal controls for financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

#### **Item 9B. Other Information**

On March 11, 2005, Novellus Systems, Inc. (the "Company") entered into an Amended and Restated Employment Agreement (the "Agreement") with Richard S. Hill, who is currently serving as the Company's Chairman and Chief Executive Officer. The Agreement amends and restates in its entirety Mr. Hill's prior Employment Agreement dated as of October 1, 1998, as amended December 17, 1999 and January 14, 2004.

The Agreement provides for an initial employment term through December 31, 2006, with automatic renewals for successive two year periods if Mr. Hill continues to serve on the last day of each term. The Agreement further provides that Mr. Hill will receive a base salary of \$840,000 per annum and will be eligible to participate in the Company's existing executive bonus plan. In addition, Mr. Hill is entitled to receive certain benefits and/or payments in connection with the termination of the Agreement. These benefits and/or payments will vary depending upon whether termination of the Agreement occurs as a result of Mr. Hill's death, disability, resignation for "Good Reason," or termination "Not for Cause" or the Company's termination "Not for Cause" (all as defined in the Agreement). If the Company terminates the Agreement for "Cause" (as defined in the Agreement), Mr. Hill will have no further rights to compensation or benefits.

The foregoing description does not purport to be complete and is qualified by reference to the full text of the Agreement. A copy of the Agreement is included as Exhibit 10.30 to this Annual Report on Form 10-K.

### **PART III**

#### **Item 10. *Directors and Executive Officers of the Registrant***

The information required by this item is included under "Proposal No. 1: Election of Directors," "Other Information — Executive Officers" and "Compliance with Section 16(a) of the Exchange Act" in our Proxy Statement, to be filed in connection with our 2005 Annual Meeting of Shareholders, and is incorporated herein by reference.

#### **Item 11. *Executive Compensation***

The information required by this item is included under "Other Information — Executive Compensation" in our Proxy Statement, to be filed in connection with our 2005 Annual Meeting of Shareholders, and is incorporated herein by reference.

#### **Item 12. *Security Ownership of Certain Beneficial Owners and Management***

The information required by this item is included under "Other Information — Security Ownership of Certain Beneficial Owners and Management" in our Proxy Statement, to be filed in connection with our 2005 Annual Meeting of Shareholders, and is incorporated herein by reference.

#### **Item 13. *Certain Relationships and Related Transactions***

The information required by this item is included under "Other Information — Certain Transactions" in our Proxy Statement, to be filed in connection with our 2005 Annual Meeting of Shareholders, and is incorporated herein by reference.

#### **Item 14. *Principal Accounting Fees and Services***

The information required by this item is included under "Audit and Non-Audit Fees" in our Proxy Statement, to be filed in connection with our 2005 Annual Meeting of Shareholders, and is incorporated herein by reference.

## PART IV

### Item 15. *Exhibits and Financial Statement Schedules*

(a) The following documents are filed as part of this report:

(1) Financial Statements and Reports of Independent Registered Public Accounting Firm

Consolidated Statements of Operations — Years Ended December 31, 2004, 2003, and 2002. Consolidated Balance Sheets at December 31, 2004 and 2003. Consolidated Statements of Cash Flows — Years Ended December 31, 2004, 2003, and 2002. Consolidated Statement of Shareholders' Equity — Years Ended December 31, 2004, 2003 and 2002. Notes to Consolidated Financial Statements. Reports of Independent Registered Public Accounting Firm.

(2) Financial Statement Schedules

The following financial statement schedule is filed as part of this Report on Form 10-K and should be read in conjunction with the financial statements:

Schedule II — Valuation and Qualifying Accounts.

All other schedules are omitted because they are not required or the required information is included in the financial statements or notes thereto.

(3) Exhibits (numbered in accordance with Item 601 of Regulation S-K)

3.1(1) Amended and Restated Articles of Incorporation of Novellus.

3.2 Amended and Restated Bylaws of Novellus.

10.1(2) Assignment and Assumption of Lessee's Interest in Lease (Units 8 and 9, Palo Alto) and Covenants, Conditions and Restrictions on Leasehold Interests (Units 1-12, Palo Alto) by and between Varian Associates, Inc. and Novellus dated May 7, 1997.

10.2(3) Environmental Agreement by and between Varian Associates, Inc. and Novellus dated May 7, 1997.

\* 10.3(4) Novellus' 1992 Stock Option Plan, together with forms of agreements thereunder.

\* 10.4(5) Form of Restated Stock Purchase Agreement between Novellus and Jeff Benzing, Wilbert van den Hoek and certain other employees of Novellus dated December 16, 1999.

\* 10.5(6) Novellus' 1992 Employee Stock Purchase Plan.

\* 10.6(7) Form of Directors and Officers Indemnification Agreement.

\* 10.7(8) GaSonics International Corporation Amended and Restated 1994 Stock Option/Stock Issuance Plan, together with forms of agreements thereunder, as assumed by Novellus.

\* 10.8(9) Gamma Precision Technology, Inc. 1998 Stock Option Plan, together with forms of agreements thereunder, as assumed by Novellus.

\* 10.9(10) GaSonics International Corporation Supplemental Stock Option Plan, as assumed by Novellus.

10.10(11) Form of Light Industrial Lease between Teachers Insurance and Annuity Association of America and GaSonics, Inc. for office space at 2730 Junction Avenue, San Jose, California.

\*10.11(12) Novellus Systems, Inc. 2001 Stock Incentive Plan dated May 11, 2001, together with forms of agreement thereunder.

\*10.12(13) SpeedFam-IPEC, Inc. Amended and Restated 1995 Stock Plan, as assumed by Novellus.

- \*10.13(14) SpeedFam-IPEC, Inc. 2001 Nonstatutory Stock Option Plan, together with forms of agreements thereunder, as assumed by Novellus.
- \*10.14(15) Integrated Process Equipment Corporation 1992 Stock Option Plan, as assumed by Novellus.
- \*10.15(16) SpeedFam International, Inc. Amended and Restated 1991 Employee Incentive Stock Option Plan, as assumed by Novellus.
- \*10.16(17) SpeedFam-IPEC, Inc. Stand-Alone Stock Option Agreement dated June 14, 2001 between SpeedFam-IPEC, Inc. and Peter Simone, as assumed by Novellus.
- 10.17(18) Lease Agreement between Seldin Properties and Integrated Process Equipment Corp. dated December 26, 1996.
- 10.18(19) Purchase and Sale Agreement between Glen Una Management Company, Inc. and SpeedFam-IPEC, Inc. dated May 31, 2002.
- 10.19(20) Lease Agreement between Phoenix Industrial Investment Partners, L.P. and SpeedFam-IPEC, Inc. dated June 21, 2002.
- 10.20(21) First Amendment to Lease Agreement between Phoenix Industrial Investment Partners, L.P. and SpeedFam-IPEC, Inc. dated January 21, 2003.
- 10.21(22) Lease Guaranty between Novellus and Phoenix Industrial Investment Partners, L.P. dated January 21, 2002.
- \*10.22(23) Letter Agreement between Novellus and Sasson Somekh dated January 23, 2004.
- \*10.23(24) Letter Agreement between Novellus and Thomas St. Dennis dated June 27, 2003.
- \*10.24(25) Restricted Stock Purchase Agreement between Novellus and Richard S. Hill dated December 13, 2002.
- \*10.25(26) Stand-Alone Stock Option Agreement dated January 23, 2004, between Novellus and Sasson Somekh.
- \*10.26(27) Stand-Alone Restricted Stock Award dated January 23, 2004, between Novellus and Sasson Somekh.
- 10.27(28) Credit Agreement, dated June 25, 2004, between Johanna 34 Vermögensverwaltungs GmbH, Novellus Systems BV, Novellus Systems, Inc. and JPMorgan Chase Bank, as Administrative Agent
- 10.28(29) Guarantee and Collateral Agreement, dated June 25, 2004, made by Novellus Systems, Inc. in favor of JPMorgan Chase Bank, as Administrative Agent
- 10.29(30) Binding Memorandum of Understanding between Novellus Systems, Inc., and Applied Materials, Inc., effective as of September 3, 2004. Portions of this exhibit have been omitted pursuant to a request for confidential treatment.
- \*10.30 Amended and Restated Employment Agreement effective as of March 11, 2005 between Novellus Systems, Inc. and Richard S. Hill.
- 21.1 Subsidiaries of Novellus.
- 23.1 Consent of Independent Registered Public Accounting Firm.
- 24.1 Power of Attorney (see page 83).
- 31.1 Certification of Richard S. Hill, Chairman of the Board of Directors and Chief Executive Officer of Novellus Systems, Inc. dated March 14, 2005 in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- 31.2 Certification of Kevin S. Royal, Vice President and Chief Financial Officer of Novellus Systems, Inc. dated March 14, 2005 in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

- 32.1 Certification of Richard S. Hill, Chairman of the Board of Directors and Chief Executive Officer of Novellus Systems, Inc. dated March 14, 2005 in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 32.2 Certification of Kevin S. Royal, Vice President and Chief Financial Officer of Novellus Systems, Inc. dated March 14, 2005 in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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- (1) Incorporated by reference to the exhibit with the corresponding exhibit number in Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 30, 2000.
- (2) Incorporated by reference to Exhibit 2.3 to Novellus' Report on Form 8-K filed with the Securities and Exchange Commission on July 7, 1997.
- (3) Incorporated by reference to Exhibit 2.6 to Novellus' Report on Form 8-K filed with the Securities and Exchange Commission on July 7, 1997.
- (4) Incorporated by reference to Exhibit 10.30 filed with Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on February 26, 1993.
- (5) Incorporated by reference to Exhibit 10.21 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 30, 2000.
- (6) Incorporated by reference to Exhibit 10.31 filed with Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on February 26, 1993.
- (7) Incorporated by reference to Exhibit 10.1 filed with Novellus' Report on Form 10-Q filed with the Securities and Exchange Commission on August 13, 2002.
- (8) Incorporated by reference to Exhibit 10.31 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 23, 2001.
- (9) Incorporated by reference to Exhibit 10.32 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 23, 2001.
- (10) Incorporated by reference to Exhibit 10.33 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 23, 2001.
- (11) Incorporated by reference to Exhibit 10.34 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 23, 2001.
- (12) Incorporated by reference to Exhibit 10.7 to Novellus' Report on Form 10-Q filed with the Securities and Exchange Commission on May 15, 2001.
- (13) Incorporated by reference to Exhibit 10.30 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (14) Incorporated by reference to Exhibit 10.31 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (15) Incorporated by reference to Exhibit 10.32 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (16) Incorporated by reference to Exhibit 10.33 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (17) Incorporated by reference to Exhibit 10.34 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (18) Incorporated by reference to Exhibit 10.35 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (19) Incorporated by reference to Exhibit 10.36 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (20) Incorporated by reference to Exhibit 10.37 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (21) Incorporated by reference to Exhibit 10.38 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.

- (22) Incorporated by reference to Exhibit 10.39 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 5, 2003.
- (23) Incorporated by reference to Exhibit 10.39 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 12, 2004.
- (24) Incorporated by reference to Exhibit 10.40 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 12, 2004.
- (25) Incorporated by reference to Exhibit 10.41 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 12, 2004.
- (26) Incorporated by reference to Exhibit 10.42 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 12, 2004.
- (27) Incorporated by reference to Exhibit 10.43 to Novellus' Report on Form 10-K filed with the Securities and Exchange Commission on March 12, 2004.
- (28) Incorporated by reference to Exhibit 10.1 to Novellus' Report on Form 8-K filed with the Securities and Exchange Commission on July 12, 2004.
- (29) Incorporated by reference to Exhibit 10.2 to Novellus' Report on Form 8-K filed with the Securities and Exchange Commission on July 12, 2004.
- (30) Incorporated by reference to Exhibit 99.1 to Novellus' Report on Form 8-K filed with the Securities and Exchange Commission on September 24, 2004.

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\* Management contracts or compensatory plans or arrangements.



## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the Registrant has duly caused this Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Jose, State of California on this 14th day of March, 2005.

NOVELLUS SYSTEMS, INC.

By: /s/ Richard S. Hill

Richard S. Hill

*Chairman of the Board of Directors  
and Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Richard S. Hill and Kevin S. Royal, and each of them, his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Richard S. Hill</u> Richard S. Hill	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	March 14, 2005
<u>/s/ Kevin S. Royal</u> Kevin S. Royal	Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 14, 2005
<u>/s/ Neil R. Bonke</u> Neil R. Bonke	Director	March 14, 2005
<u>/s/ Youssef A. El-Mansy</u> Youssef A. El-Mansy	Director	March 14, 2005
<u>/s/ J. David Litster</u> J. David Litster	Director	March 14, 2005
<u>/s/ Yoshio Nishi</u> Yoshio Nishi	Director	March 14, 2005
<u>/s/ Glen G. Possley</u> Glen G. Possley	Director	March 14, 2005
<u>/s/ Ann D. Rhoads</u> Ann D. Rhoads	Director	March 14, 2005
<u>/s/ William R. Spivey</u> William R. Spivey	Director	March 14, 2005
<u>/s/ Delbert Whitaker</u> Delbert Whitaker	Director	March 14, 2005

**SCHEDULE II**  
**VALUATION AND QUALIFYING ACCOUNTS**

December 31, 2004, 2003 and 2002  
(In thousands)

	<u>Balance at Beginning of Year</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance at End of Year</u>
Allowance for doubtful accounts (1)				
2004 .....	\$ 7,655	\$ 546	\$ 46	\$ 8,247
2003 .....	\$ 7,339	\$ —	\$ 316	\$ 7,655
2002 .....	\$ 14,390	\$ 1,042	\$ (8,093)	\$ 7,339
Valuation allowance for deferred tax asset (2)				
2004 .....	\$ 76,510	\$ 14,193	\$ (10,422)	\$ 80,281
2003 .....	\$ 57,028	\$ 35,799	\$ (16,317)	\$ 76,510
2002 .....	\$ 7,628	\$ 52,500	\$ (3,100)	\$ 57,028

(1) Deductions represent uncollectible accounts written off, net of recoveries.

(2) Additions include \$14.2 million, \$32.4 million and \$52.5 million of adjustments to goodwill, equity or other balance sheet accounts in the years ended December 31, 2004, 2003 and 2002, respectively.



**NOVELLUS SYSTEMS, INC.  
4000 North First Street  
San Jose, California 95134**

March 21, 2005

To the Shareholders of Novellus Systems, Inc.:

You are cordially invited to attend the annual meeting of shareholders (the "Annual Meeting") of Novellus Systems, Inc. (the "Company") on April 29, 2005 at 8:00 a.m., Pacific Time. The Annual Meeting will be held at the Company's principal executive offices, 4000 North First Street, San Jose, California 95134.

A description of the business to be conducted at the Annual Meeting is set forth in the attached Notice of Annual Meeting and Proxy Statement.

Whether or not you plan to attend the Annual Meeting, **please submit your proxy as soon as possible so that your shares can be voted at the Annual Meeting in accordance with your instructions. You may submit your proxy (i) over the Internet, (ii) by telephone, or (iii) by signing, dating and returning the enclosed Proxy Card promptly in the accompanying envelope.** Your proxy is revocable in accordance with the procedures set forth in the Proxy Statement. If you attend the Annual Meeting and wish to change your proxy vote, you may do so simply by voting in person at the Annual Meeting.

Richard S. Hill  
*Chairman of the Board and  
Chief Executive Officer*

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**NOVELLUS SYSTEMS, INC.**  
**4000 North First Street**  
**San Jose, California 95134**

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**NOTICE OF ANNUAL MEETING OF SHAREHOLDERS**  
**to be held April 29, 2005**

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To the Shareholders of Novellus Systems, Inc.:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Shareholders ("Annual Meeting") of Novellus Systems, Inc. (the "Company") will be held on April 29, 2005 at 8:00 a.m. Pacific Time, at the Company's principal executive offices, 4000 North First Street, San Jose, California 95134, for the following purposes:

1. To elect nine directors of the Company to serve for the ensuing year and until their successors are elected and qualified.
2. To ratify and approve an amendment to the Company's 2001 Stock Incentive Plan to increase the number of shares reserved for issuance thereunder from 6,360,000 shares to 10,860,000 shares.
3. To ratify and approve an amendment to the Company's Amended and Restated 1992 Employee Stock Purchase Plan to increase the number of shares reserved for issuance thereunder from 4,900,000 shares to 5,900,000 shares.
4. To ratify and approve the appointment of Ernst & Young LLP as independent auditors for the Company for the fiscal year ending December 31, 2005.
5. To transact such other business as may properly come before the Annual Meeting and any adjournment or postponement thereof.

The foregoing items of business, including the nominees for directors, are more fully described in the Proxy Statement which is attached hereto and made a part hereof. The Annual Meeting will be open to shareholders of record, proxy holders, and others by invitation only. Beneficial owners of shares held by a broker or nominee must present proof of such ownership to attend the meeting.

The Board of Directors has fixed the close of business on March 1, 2005 as the record date for determining the shareholders entitled to notice of and to vote at the 2005 Annual Meeting and any adjournment or postponement thereof.

FOR THE BOARD OF DIRECTORS,

Kent S. Nagel  
*Secretary*

San Jose, California  
March 21, 2005

**YOUR VOTE IS IMPORTANT**

To ensure your representation at the Annual Meeting, you are urged to submit your proxy as soon as possible so that your shares can be voted at the meeting in accordance with your instructions. You may submit your proxy (i) over the Internet, (ii) by telephone, or (iii) by signing, dating and returning the enclosed Proxy Card promptly in the accompanying envelope. Your proxy is revocable in accordance with the procedures set forth in the Proxy Statement. If you attend the Annual Meeting, you may vote in person even if you returned a proxy.

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**NOVELLUS SYSTEMS, INC.**  
**4000 North First Street**  
**San Jose, California 95134**

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**PROXY STATEMENT**

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**Annual Meeting of Shareholders**  
**April 29, 2005**

**General Information**

The enclosed proxy is solicited on behalf of the Board of Directors of Novellus Systems, Inc. (the "Company") for use at the Annual Meeting of Shareholders to be held on April 29, 2005 at 8:00 a.m., Pacific Time (the "Annual Meeting"), or at any adjournment or postponement thereof. The Annual Meeting will be held at the Company's principal executive offices, 4000 North First Street, San Jose, California 95134.

This Proxy Statement and the form of proxy are first being mailed to shareholders on or about March 21, 2005.

**Revocability of Proxies**

Any proxy given pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to the Company (to the attention of Kent S. Nagel, Secretary) a written notice of revocation or a duly executed proxy bearing a later date or by attending the meeting and voting in person. Attendance at the Annual Meeting in and of itself does not revoke a prior proxy.

**Record Date, Share Ownership and Quorum**

Shareholders of record at the close of business on March 1, 2005 (the "Record Date") are entitled to be present and to vote at the Annual Meeting. At the Record Date, 140,498,865 shares of the Company's common stock (the "Common Stock"), were issued and outstanding. The presence of a majority of these shares of Common Stock will constitute a quorum for the transaction of business at the Annual Meeting.

**Voting and Solicitation**

Each share of Common Stock outstanding on the Record Date is entitled to one vote. Under the Company's cumulative voting provisions, each shareholder may cast his or her votes for a single nominee for director, or distribute among up to nine nominees a number of votes equal to nine multiplied by the number of shares held by that shareholder. However, cumulative voting will not be available unless, at the Annual Meeting, at least one shareholder has given notice of his or her intent to cumulate votes prior to the voting, and will apply only to those candidates whose names have been placed in nomination prior to the voting.

If you are not planning to attend the Annual Meeting and vote your shares in person, your shares of Common Stock cannot be voted until either a signed Proxy Card is returned to the Company or voting instructions are submitted by using the Internet or by calling the specifically designated telephone number. Any shareholder may change his or her vote before the Annual Meeting by (i) revoking his or her proxy and submitting a proxy bearing a later date, (ii) submitting new voting instructions via the Internet, or (iii) calling the specifically designated telephone number. The Internet and telephone voting procedures are designed to authenticate shareholders' identities, to allow shareholders to provide voting instructions, and to confirm that instructions have been recorded properly. The Company believes its procedures are consistent with the requirements of applicable law. Specific instructions for shareholders of record who wish to use the Internet or telephone voting procedures are set forth on the enclosed Proxy Card.

The enclosed Proxy Card also serves as a voting instruction to the trustee of the Novellus Systems, Inc. Retirement Plan for shares of Company Common Stock held in the Novellus Systems, Inc. Retirement Plan as of the Record Date, provided that instructions are furnished over the Internet or by telephone by 5:00 p.m. Eastern Time on April 25, 2005, or that the Proxy Card is signed, returned, and received by 5:00 p.m. Eastern Time on April 25, 2005. If instructions are not received over the Internet or by telephone by 5:00 p.m. Eastern Time on April 25, 2005, or if the signed Proxy Card is not returned and received by such date and time, the shares of Company Common Stock in the Novellus Systems, Inc. Retirement Plan will be voted by the trustee in proportion to the shares for which the Trustee timely receives voting instructions.

The cost of managing the proxy process will be borne by the Company. The Company has retained the services of Georgeson Shareholder Communications, Inc. to assist in the solicitation of proxies for a fee not to exceed \$9,500 plus any customary out-of-pocket expenses and service fees. In addition, the Company will reimburse brokerage firms and other persons representing beneficial owners of shares for their expenses in forwarding proxy materials to those beneficial owners. Certain of the Company's directors, officers and regular employees, without additional compensation, may also solicit proxies personally or by telephone, fax or telegram.

The Inspector of Elections will tabulate votes cast by proxy or in person at the Annual Meeting with the assistance of Automatic Data Processing, Inc. ("ADP"). The Inspector of Elections will also determine whether or not a quorum is present. Except with respect to the election of directors at the Annual Meeting whereby directors are elected by a plurality, the affirmative vote of a majority of shares of Common Stock represented and voting at a duly held Annual Meeting at which a quorum is present (which shares of Common Stock voting affirmatively also constitute at least a majority of the required quorum) is required under California law for approval of the proposals presented to shareholders at this Annual Meeting. In general, California law provides that a quorum consists of a majority of the shares of Common Stock entitled to vote, represented either in person or by proxy. With respect to any matter submitted to a vote of the shareholders, the Inspector of Elections will treat abstentions as shares that are present and entitled to vote for purposes of determining the presence of a quorum but as not voting for purposes of determining the approval of that matter. Any proxy which is returned using the form of proxy enclosed and which is not marked as to any one of the following items will be voted FOR the election of directors, FOR approval of the amendment to the 2001 Stock Incentive Plan, FOR approval of the amendment to the Amended and Restated 1992 Employee Stock Purchase Plan, and FOR ratification and approval of the appointment of Ernst & Young LLP as independent auditors for the fiscal year ending December 31, 2005, and as the proxy holders deem advisable on other matters that may come before the meeting, with respect in each case to the particular item or items not marked. If a broker indicates on the enclosed proxy or its substitute that it does not have discretionary authority as to certain shares of Common Stock to vote on a particular matter ("broker non-votes"), those shares will be considered present and entitled to vote for purposes of determining a quorum but as not voting with respect to that matter. While there is no definitive specific statutory or case law authority in California concerning the proper treatment of abstentions and broker non-votes, the Company believes that the tabulation procedures to be followed by the Inspector of Elections are consistent with the general statutory requirements in California concerning voting of shares and determination of a quorum.

### **Householding of Annual Meeting Materials**

Some brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of the Proxy Statement and annual report may have been sent to multiple shareholders in a shareholder's household. The Company believes this "householding" rule will provide greater convenience for its shareholders, as well as cost savings for the Company by reducing the number of duplicate documents that are sent to shareholders' homes.

The "householding" election appears on the Proxy Card accompanying this Proxy Statement. If you wish to participate in the "householding" program, please indicate "YES" when voting your proxy. Your affirmative or implied consent will be perpetual unless you withhold it or revoke it. If you wish to continue to receive separate proxy statements and annual reports for each account in your household, you must withhold your consent to our "householding" program by so indicating when voting your proxy. *Please note that if you do not respond, you will be deemed to have consented, and "householding" will begin 60 days after the mailing of this Proxy Statement.*



You may revoke your consent at any time by contacting ADP, either by calling toll-free (800) 542-1061, or by writing to ADP, Householding Department, 51 Mercedes Way, Edgewood, New York 11717. If you revoke your consent you will be removed from the "householding" program within 30 days of receipt of your revocation and each shareholder at your address will receive individual copies of the Company's disclosure documents.

#### **Deadline for Receipt of Shareholder Proposals**

*Requirements for Shareholder Proposals to be Brought Before an Annual Meeting.* For shareholder proposals to be considered properly brought before an annual meeting by a shareholder, the shareholder must have given timely notice therefor in writing to the Secretary of the Company. To be timely for the Company's 2006 Annual Meeting of Shareholders, a shareholder's notice must be delivered to or mailed and received at the principal executive offices of the Company between January 6, 2006 and February 5, 2006. A shareholder's notice to the Secretary shall set forth as to each matter the shareholder proposes to bring before the annual meeting (i) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (ii) the name and record address of the shareholder proposing such business, (iii) the class and number of shares of the Company beneficially owned by the shareholder, and (iv) any material interest of the shareholder in such business.

*Requirements for Shareholder Proposals to be Considered for Inclusion in the Company's Proxy Materials.* Shareholder proposals submitted pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and intended to be presented at the Company's 2006 Annual Meeting of Shareholders must be received by the Company not later than November 22, 2005 in order to be considered for inclusion in the Company's proxy materials for that meeting.

## PROPOSAL NO. 1

### ELECTION OF DIRECTORS

The authorized number of directors is currently fixed at nine, as set by the Board of Directors (the "Board" or "Board of Directors") pursuant to the Bylaws of the Company. Accordingly, nine directors will be elected by the shareholders at the Annual Meeting. The Governance and Nominating Committee has recommended, and the Board of Directors has nominated, the nine persons listed below for election as directors at the Annual Meeting, each to serve until the 2006 annual meeting of shareholders, until each director's successor is elected or appointed or until the earlier resignation or removal of the director. The nine nominees receiving the highest number of affirmative votes will be elected as directors. All of the nominees are currently directors of the Company, and each of the nominees named below has consented, if elected as a director of the Company, to serve until his or her term expires. Unless otherwise instructed, the proxy holders will vote the proxies they receive FOR the nine nominees of the Board named below. In the event that any nominee of the Board is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for any nominee designated by the present Board to fill the vacancy. It is not expected that any nominee will be unable or will decline to serve as a director. In the event that additional persons are nominated for election as directors, the proxy holders shall vote all proxies received by them in such a manner in accordance with cumulative voting as will assure the election of as many of the nominees listed below as possible, with any required selection among such nominees to be determined by the proxy holders.

#### The Board of Directors recommends a vote FOR the nominees listed below

<u>Name of Nominee</u>	<u>Age</u>	<u>Principal Occupation</u>	<u>Director Since</u>
Richard S. Hill .....	53	Chairman of the Board and Chief Executive Officer	1993
Neil R. Bonke .....	63	Retired semiconductor equipment industry executive, private investor	2004
Youssef A. El-Mansy .....	60	Retired Vice President, Director of Logic Technology Development, Intel Corporation	2004
J. David Litster .....	66	Professor of Physics at the Massachusetts Institute of Technology	1998
Yoshio Nishi .....	65	Professor of Electrical Engineering and Director of the Stanford University Nanofabrication Facility	2002
Glen G. Possley .....	64	Managing General Partner of Glen-Ore Associates, a consulting enterprise focused on the semiconductor business	1991
Ann D. Rhoads .....	39	Chief Financial Officer of Premier, Inc., a healthcare supply management company	2003
William R. Spivey .....	58	Retired President and Chief Executive Officer of Luminent, Inc.	1998
Delbert A. Whitaker .....	61	Retired Senior Vice President, Texas Instruments, Inc.	2002

The term of office of each person elected as a director will continue until the next annual meeting of shareholders or until his or her successor has been elected and qualified. The Company's Bylaws provide that no person may be elected to the Board of Directors after having attained the age of 68 years. However, a person who was a director prior to March 16, 2001, may not be elected to the Board of Directors after attaining the age of 70 years. There is no family relationship between any director and any other director or executive officer of the Company.

*Mr. Hill* has been Chief Executive Officer and a member of the Board of Directors of the Company since December 1993. In May 1996, he was appointed Chairman of the Board of Directors. From 1981 to 1993, Mr. Hill was employed by Tektronix, Inc., an electronics company, where he held positions such as President of the Tektronix Development Company, Vice President of the Test & Measurement Group, and President of Tektronix Components Corporation. Prior to joining Tektronix, Inc. Mr. Hill held engineering or management positions at General Electric Corporation, Motorola and Hughes Aircraft Company. Mr. Hill holds a bachelor's degree in engineering from the University of Illinois and a master's degree in business administration from Syracuse University. Mr. Hill is also a member of the Board of Directors of LTX Corporation, Agere Systems Inc., and the University of Illinois Foundation.

*Mr. Bonke* became a member of the Board of Directors in April 2004. Mr. Bonke has been a private investor for the past six years and is the retired Chairman of the Board and Chief Executive Officer of Electroglas, Inc., a semiconductor test equipment manufacturer. He also serves on the Board of Directors of Sanmina-SCI Corporation, an electronics manufacturing services company. Mr. Bonke is a past director of the San Jose State University Foundation. Mr. Bonke holds a Bachelor of Science degree in Engineering and Technical Marketing from Clarkson University.

*Mr. El-Mansy* became a member of the Board of Directors in April 2004. Mr. El-Mansy is the retired Vice President, Director of Logic Technology Development, at Intel Corporation ("Intel") where he was responsible for managing technology development, the processor design center for Intel's Technology and Manufacturing Group and two wafer manufacturing facilities. Mr. El-Mansy joined Intel in 1979 and has led microprocessor technology development at Intel for the past 20 years. Prior to joining Intel, Mr. El-Mansy held engineering positions at Bell Northern Research in Canada. Mr. El-Mansy is also a member of the Board of Directors of Zygo Corporation, a designer and manufacturer of optical systems. Mr. El-Mansy holds Bachelor of Science and Masters degrees in Electronics and Communications from Alexandria University in Egypt and a Ph.D. in Electronics from Carleton University in Ottawa, Canada.

*Mr. Litster* joined the Board of Directors in February 1998. Mr. Litster is a Professor of Physics at the Massachusetts Institute of Technology ("MIT"). He was Vice President and Dean for Research at MIT. From 1983 through 1988, he was the director of MIT's Center for Materials Science and Engineering and from 1988 through 1992, he was the director of the Francis Bitter National Magnet Laboratory at MIT. Mr. Litster is a fellow of the American Physical Society, the American Academy of Arts and Sciences and the American Association for the Advancement of Science. In 1993, Mr. Litster was awarded the Irving Langmuir Prize by the American Physical Society. Mr. Litster holds a Bachelor of Engineering degree from McMaster University in Hamilton, Ontario, Canada, and a Ph.D. in Physics from MIT.

*Mr. Nishi* joined the Board of Directors in May 2002. Mr. Nishi is currently Professor of Electrical Engineering and Director of the Stanford University Nanofabrication Facility. Mr. Nishi joined Stanford University in May 2002 after serving as Director of Research and Development and Senior Vice President at Texas Instruments, Inc., a semiconductor company, from 1995 to 2002. Mr. Nishi joined Texas Instruments, Inc. in 1995 as Vice President and Director of Research and Development for the Semiconductor Group. From 1986 to 1995, Mr. Nishi held various senior management positions in research and development at Hewlett Packard Company. From 1969 to 1985, Mr. Nishi held various managerial positions at Toshiba Corporation. From 1986 to 2002, Mr. Nishi was a Consulting Professor in the Department of Electrical Engineering and served on the Advisory Committee for the Center for Integrated Systems at Stanford University. Since the 1993 academic year, Mr. Nishi has been teaching at Waseda University in Japan as a visiting professor of the Material Sciences and Engineering Department and the Electronic Communication Engineering Department for intensive courses. Mr. Nishi has served on a wide range of boards, committees and advisory boards including The Development Board and Executive Committee for the University of Texas, the Board of Directors of the Japan-America Society of Dallas/Fort Worth, the Advisory Committee, Information Sciences & Technology, Lawrence Livermore National Laboratory and the Board of Directors of SEMATECH. Mr. Nishi holds a Bachelor of Science degree in Metallurgy from Waseda University and a Ph.D. in Electronics Engineering from the University of Tokyo.

*Mr. Possley* joined the Board of Directors in July 1991. He is currently a managing general partner of Glen-Ore Associates, a consulting enterprise focused on the semiconductor industry. From October 1997 through December 1999, Mr. Possley was an associate consultant at N-Able Group. From March 1994 to September 1997, Mr. Possley was President of SubMicron Technology, PCL, a semiconductor wafer manufacturing company. From April 1992 to May 1994, he was Senior Vice President of Manufacturing at Ramtron International, a semiconductor company. From January 1991 to March 1992, he was Vice President, Operations at Sandisk, Inc., a manufacturer of solid state memory systems. From January 1986 to December 1990, Mr. Possley was Senior Vice President of Manufacturing for Philips Semiconductor, Inc., a semiconductor company. Prior to joining Philips Semiconductor, Inc., he was Vice President, Wafer Fabrication and Research and Development at United Technologies Mostek, and held management and engineering positions with Motorola, Inc., Texas Instruments, Inc., Fairchild Camera and Instrument Corporation and the semiconductor division of General Electric Corporation. Mr. Possley is also a director of Catalyst Semiconductor, Inc. Mr. Possley holds a Bachelor of Science degree in Mathematics from Western Illinois University and a Ph.D. in Physical Chemistry from the University of Kentucky.

*Ms. Rhoads* joined the Board of Directors in February 2003. She is currently Chief Financial Officer of Premier, Inc., a healthcare supply management company. From 1998 to 2000, she was Vice President, Strategic Initiatives at Premier, Inc. From 1993 to 1998, Ms. Rhoads was a Vice President of The Sprout Group, an institutional venture capital firm. Ms. Rhoads is also a member of the Board of Directors of Innovatix, LLC, a privately held company. Ms. Rhoads holds a Bachelor of Science degree in Finance from the University of Arkansas and a Masters degree from the Harvard Graduate School of Business Administration.

*Mr. Spivey* joined the Board of Directors in May 1998. From 2000 to 2001, he was President, Chief Executive Officer and a Director of Luminent, Inc. From 1997 to 2000, he was Group President, Network Products Group of Lucent Technologies. From 1994 to 1997, he was Vice President of the Systems and Components Group of AT&T. From 1991 to 1994, he was the President of Tektronix Development Company and Group President at Tektronix, Inc. Previously, Mr. Spivey held managerial positions at Honeywell, Inc. and General Electric Corporation. Mr. Spivey also serves on the Board of Directors of Cascade Microtech, Inc., the Laird Group, Plc., Raytheon Company, ADC Telecommunications, and Lyondell Chemical Company. Mr. Spivey holds a Bachelor of Science degree in Physics from Duquesne University, a Masters degree in Physics from Indiana University of Pennsylvania and a Ph.D. in Management from Walden University.

*Mr. Whitaker* joined the Board of Directors in March 2002. From 1968 to 2000, Mr. Whitaker was employed by Texas Instruments, Inc., a semiconductor company, where he held positions including Senior Vice President of Worldwide Analog and Standard Logic, Vice President of US Semiconductor Business, and various management positions in product departments, marketing and sales. Prior to joining Texas Instruments, Inc., Mr. Whitaker held an engineering position at General Electric Corporation. Mr. Whitaker holds a Bachelor of Science degree in Electrical Engineering from Texas A&M University where he is a member of the Engineering Advisory Board.

#### **Director Emeritus**

The Board has elected D. James Guzy to serve as director emeritus until April 16, 2006. As a director emeritus, Mr. Guzy will be invited to attend Board and committee meetings, but he will not have voting rights.

#### **Board Meetings and Committees**

The Board of Directors of the Company held ten meetings during 2004. During the last year, no incumbent director attended fewer than 75% of the meetings of the Board of Directors and its committees on which he or she served that were held during the period in which he or she was a director. The Board of Directors has an Audit Committee, a Stock Option and Compensation Committee, and a Governance and Nominating Committee. The Company encourages, but does not require, its Board members to attend the annual shareholders meeting. All of the then-current members of the Board attended the 2004 annual meeting of shareholders. The Board has determined that a majority of the current Board members, Ms. Rhoads and Messrs. Bonke, El-Mansy, Litster,

Nishi, Possley, Spivey and Whitaker, are "independent" as that term is defined in Rule 4200 of the listing standards of the Marketplace Rules of the Nasdaq Stock Market, Inc. ("Nasdaq").

*Audit Committee.* During 2004, Ms. Rhoads, Messrs. Bonke and Possley and Mr. Guzy, until becoming director emeritus in April 2004, served on the Audit Committee, which held twelve meetings over the course of the year. The Audit Committee oversees the accounting and financial reporting processes of the Company and audits of the Company's financial statements. The Audit Committee appoints the Company's independent auditors and is responsible for approving the services performed by the Company's independent auditors and for reviewing and evaluating the Company's accounting principles and its system of internal accounting controls. All members of the Audit Committee meet the standards for independence set forth in Rule 10A-3(b) promulgated under the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), and have been determined by the Board to be "independent" as that term is defined in Rule 4200(a)(15) of the listing standards of Nasdaq. The Board has further determined that Ms. Rhoads is an "audit committee financial expert" as defined by Item 401(h) of Regulation S-K of the Exchange Act and is independent as defined by Item 7(d)(3)(iv) of Schedule 14A of the Exchange Act.

The Audit Committee operates under a written charter that sets forth its functions and responsibilities. The current Audit Committee charter was approved on February 3, 2005, and a copy of the amended charter is attached to this Proxy Statement as Appendix B. A copy of the charter is also posted on the Company's website at [www.novellus.com](http://www.novellus.com).

*Stock Option and Compensation Committee.* During 2004, Messrs. El-Mansy, Litster, Nishi, Spivey and Whitaker served on the Stock Option and Compensation Committee. The Stock Option and Compensation Committee held five meetings during 2004. All members of the Stock Option and Compensation Committee are "independent" directors within the meaning of Rule 4200 of the listing standards of Nasdaq. The Stock Option and Compensation Committee administers the issuance of restricted stock and the granting of options to purchase stock of the Company pursuant to the Company's stock plans and, in accordance with the terms of the respective stock plans, determines the terms and conditions of such issuances and grants. In addition, it reviews and approves the Company's executive compensation policy as well as sets compensation for executive officers.

The Stock Option and Compensation Committee operates under a written charter that sets forth its functions and responsibilities. The current Stock Option and Compensation Committee charter was approved on February 3, 2005 and a copy of the amended charter is posted on the Company's website at [www.novellus.com](http://www.novellus.com).

*Governance and Nominating Committee.* During 2004, Messrs. El-Mansy, Whitaker, Nishi and Spivey and Mr. Guzy, until becoming director emeritus in April 2004, served on the Governance and Nominating Committee, which held four meetings during 2004. All members of the Governance and Nominating Committee are "independent" directors within the meaning of Rule 4200 of the listing standards of Nasdaq. The Governance and Nominating Committee monitors the size and composition of the Board. Prior to the Company's annual meeting of shareholders, the Governance and Nominating Committee, pursuant to qualification guidelines, assists the Board in selecting the candidates that will be presented to the Company's shareholders for election as directors at the next annual meeting. The Governance and Nominating Committee considers and makes recommendations to the Board regarding any shareholder recommendations for candidates to serve on the Board. However, the Governance and Nominating Committee has not adopted a formal process for that consideration because it believes that the informal consideration process has been adequate given the small number of shareholder recommendations in the past. The Governance and Nominating Committee will review periodically whether a more formal policy should be adopted. Shareholders wishing to recommend candidates for consideration by the Governance and Nominating Committee may do so by writing to the Secretary of the Company at 4000 North First Street, San Jose, California 95134, providing the candidate's name, biographical data and qualifications, a document indicating the candidate's willingness to act if elected, and evidence of the nominating shareholder's ownership of the Company's Common Stock at least 120 days prior to the next annual meeting to assure time for meaningful consideration by the Governance and Nominating Committee. There is no difference in the manner in which the Governance and Nominating Committee evaluates nominees for director based on whether the

nominee is recommended by a shareholder, by management or by the Board. The Company does not pay any third party to identify or assist in identifying or evaluating potential nominees.

In reviewing potential candidates to serve on the Board, the Governance and Nominating Committee considers experience in the semiconductor equipment industry, general business or other experience, the Company's need for an additional or replacement director, the personality of the candidate, the candidate's interest in the business of the Company, and other subjective criteria. Of greatest importance are the individual's integrity, willingness to be actively involved and ability to bring to the Company experience and knowledge in areas that are most beneficial to the Company. The Board intends to continue to evaluate candidates for election to the Board on the basis of the foregoing criteria.

The Governance and Nominating Committee operates under a written charter that sets forth its functions and responsibilities. The current Governance and Nominating Committee charter was approved on February 3, 2005 and a copy of the charter is posted on the Company's website at [www.novellus.com](http://www.novellus.com).

### **Corporate Governance**

The Company has formal corporate governance standards in place. The Board has reviewed the provisions of the Sarbanes-Oxley Act of 2002, the rules of the Securities and Exchange Commission and the Nasdaq Stock Market, Inc. corporate governance listing standards regarding corporate governance policies and procedures. The Board believes the Company is in compliance with such rules and listing standards. A chart setting forth the current status of the Company's compliance with basic corporate governance guidelines is attached to this Proxy Statement as Appendix A. Additionally, the Company has adopted charters for each of its committees as well as a set of Principles of Corporate Governance. The Governance and Nominating Committee is responsible for overseeing the Principles of Corporate Governance and reporting and making recommendations to the Board concerning corporate governance matters. Copies of the Principles of Corporate Governance and the charters of each of the committees are posted on the Company's website at [www.novellus.com](http://www.novellus.com).

The following chart sets forth certain information concerning members of the Board and their compliance with governance policies and standards in fiscal year 2004:

Director	I – Independent, E – Employee	Governance & Nominating Committee – Chair*	Audit Committee – Chair*	Stock Option & Compensation Committee – Chair*	% Board Mtg's Attended	Qualified Financial Expert	Audit Committee Independence	Financially Literate
William R. Spivey .....	I	Yes*	-	Yes	90	N/A	Yes	Yes
Neil R. Bonke .....	I	-	Yes	-	100	N/A	Yes	Yes
J. David Litster .....	I	-	-	Yes*	100	N/A	Yes	Yes
Ann D. Rhoads .....	I	-	Yes*	-	90	Yes	Yes	Yes
Glen G. Possley .....	I	-	Yes	-	100	N/A	Yes	Yes
Delbert A. Whitaker ....	I	Yes	-	Yes	90	N/A	Yes	Yes
Yoshio Nishi .....	I	Yes	-	Yes	100	N/A	Yes	Yes
Youssef A. El-Mansy....	I	Yes	-	Yes	80	N/A	Yes	Yes
Richard S. Hill .....	E	-	-	-	90	N/A	No	Yes

Director	Date of Most Recent Director Education	Total # of Public Boards Serving on Including Novellus	Lead Director	Age	Participated in CEO Evaluation Deliberations	Participated in Mgmt Succession & Development Session	Access To Mgmt	Participated in Board Evaluation
William R. Spivey .....	5/14/04	6	X	58	Yes	Yes	Yes	Yes
Neil R. Bonke .....	-	2	-	63	Yes	Yes	Yes	Yes
J. David Litster .....	4/27/04	1	-	66	Yes	Yes	Yes	Yes
Ann D. Rhoads .....	6/4/04	1	-	39	Yes	Yes	Yes	Yes
Glen G. Possley .....	6/5/01	2	-	64	Yes	Yes	Yes	Yes
Delbert A. Whitaker ....	-	1	-	61	Yes	Yes	Yes	Yes
Yoshio Nishi .....	-	1	-	65	Yes	Yes	Yes	Yes
Youssef A. El-Mansy....	-	2	-	60	Yes	Yes	Yes	Yes
Richard S. Hill .....	6/21/04	2	-	53	No	Yes	Yes	Yes

### Code of Conduct

The Board has adopted a Code of Conduct that applies to all directors, officers, and employees of the Company as required by applicable securities laws, rules of the Securities and Exchange Commission ("SEC"), and the listing standards of Nasdaq. A copy of the Code of Conduct is posted on the Company's website at [www.novellus.com](http://www.novellus.com). The Company will post on its website any amendments to, or waivers from, any provision of its Code of Conduct.

### Communication between Shareholders and Directors

The Board does not currently have a formal process for shareholders to send communications to it. Nevertheless, every effort has been made to ensure that the views of shareholders are heard by the Board or by individual directors, as applicable, and that timely and appropriate responses are provided. The Board does not recommend that formal communication procedures be adopted at this time because it believes that informal communications are sufficient to communicate questions, comments and observations that could be useful to the Board. Shareholders wishing to formally communicate with the Board may send communications directly to Richard S. Hill, Chairman of the Board, and/or William R. Spivey, Lead Director, c/o Novellus Systems, Inc., 4000 North First Street, San Jose, California 95134.

### Director Compensation

Until July 1, 2004, directors who were not employees of the Company ("Outside Directors") received an annual retainer of \$ 30,000, a fee of \$ 2,000 for each meeting of the Board attended, a fee of \$ 1,000 for each meeting of a committee of the Board attended and an annual option grant of 18,000 shares of Common Stock under the Company's 2001 Stock Incentive Plan. The exercise price per share of such options was 100% of the fair market value of the Common Stock on the date of grant of the option. Options granted had a maximum term of five years and were immediately exercisable. Pursuant to this policy, on April 19, 2004, Ms. Rhoads and

Messrs. Bonke, El-Mansy, Litster, Nishi, Possley, Spivey and Whitaker, were each granted an option to purchase 18,000 shares of Common Stock at an exercise price of \$ 31.72 per share. Effective July 1, 2004, upon the recommendation of the Stock Option and Compensation Committee, the Board amended the compensation schedule for Outside Directors to provide for an annual retainer of \$ 30,000, a lead director fee of \$ 10,000, an audit committee chair fee of \$ 10,000, a compensation committee chair fee of \$ 5,000, a fee of \$ 2,000 for each meeting of the Board attended, a fee of \$ 1,000 for each meeting of a committee of the Board attended and pending shareholder approval, an annual restricted stock award of 5,000 shares of Common Stock with vesting over a three-year period. The elimination of annual stock option grants in favor of restricted stock awards is conditioned upon shareholder approval of the proposed amendment to the Company's 2001 Stock Incentive Plan as set forth in Proposal No. 2 of the Proxy Statement.

The following table provides certain information with respect to board fees paid to and stock options granted to each of the current members of the Board during the fiscal year ended December 31, 2004:

Board Director	2004 Board Fees	Number of Securities Underlying Options Granted	Exercise Price Per Share	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term (1)	
					5%	10%
Neil R. Bonke .....	\$ 38,264	18,000	\$ 31.72	4/19/2009	\$ 157,746	\$ 348,577
Youssef A. El-Mansy .....	34,264	18,000	31.72	4/19/2009	157,746	348,577
J. David Litster .....	62,000	18,000	31.72	4/19/2009	157,746	348,577
Yoshio Nishi .....	53,000	18,000	31.72	4/19/2009	157,746	348,577
Glen G. Possley .....	62,000	18,000	31.72	4/19/2009	157,746	348,577
Ann D. Rhoads .....	70,000	18,000	31.72	4/19/2009	157,746	348,577
William R. Spivey .....	62,000	18,000	31.72	4/19/2009	157,746	348,577
Delbert A. Whitaker .....	52,000	18,000	31.72	4/19/2009	157,746	348,577

- (1) The potential realizable value portion of the foregoing table illustrates value that might be realized upon exercise of the options immediately prior to the expiration of their terms, assuming the specified compounded rates of appreciation on the Company's Common Stock over the term of the options. Actual gains, if any, on stock option exercise are dependent upon a number of factors, including the future performance of the Common Stock, overall stock market conditions and the timing of option exercises, if any. There can be no assurance that amounts reflected in this table will be achieved.



## PROPOSAL NO. 2

### RATIFICATION AND APPROVAL OF AN AMENDMENT TO THE COMPANY'S 2001 STOCK INCENTIVE PLAN

#### General

The shareholders are asked to approve the action of the Board of Directors amending the Company's 2001 Stock Incentive Plan (the "2001 Plan"). Approval of the amendment requires the affirmative vote of the holders of a majority of the shares of Common Stock present or represented and entitled to vote at the Annual Meeting. Shareholders abstaining from voting on Proposal No. 2 will be counted for purposes of determining a quorum, but will not be counted for any other purpose. Broker non-votes will not be considered as present or voting, and as such each will have no effect on the vote for this proposal. Capitalized terms used in this Proposal No. 2 shall have the same meaning as in the 2001 Plan unless otherwise indicated.

Subject to shareholder approval, the Board of Directors of the Company approved the amendment of the 2001 Plan in March 2005 to (a) increase the number of shares reserved for issuance under the 2001 Plan by 4,500,000 shares from 6,360,000 shares to 10,860,000 shares, subject to adjustment in the event of a stock split, stock or other extraordinary dividend, or other similar change in the Common Stock or capital structure of the Company, and (b) remove the automatic option grant program under which non-employee directors are granted an option to purchase 18,000 shares of Common Stock following each annual meeting of the shareholders. Of the total additional shares proposed to be reserved for issuance under the 2001 Plan, a maximum of 2,136,000 shares may be awarded as grants of Restricted Stock. The removal of the automatic non-employee director option grant program is conditioned upon shareholder approval of the amendment of the 2001 Plan as described above. The automatic non-employee director option grant program is being revised in order to permit greater flexibility in the granting of awards to non-employee directors under the 2001 Plan. Subject to approval of the amendment of the 2001 Plan by the shareholders of the Company, each non-employee director will be granted 5,000 shares of restricted stock on the first business day after the Annual Meeting, with one-third of the shares to vest on each yearly anniversary of the date of grant. The grant of 5,000 shares of restricted stock is intended to replace the automatic grant of 18,000 options that the non-employee directors would have received following the Annual Meeting.

The 2001 Plan is intended to enable the Company to attract and retain the best available personnel for positions at the Company, to provide additional incentive to employees, directors and consultants and to promote the success of the Company's business. The Board believes that the Company's long term success is dependent upon the ability of the Company to attract and retain superior individuals who, by virtue of their ability and qualifications, make important contributions to the Company and its shareholders.

**The Board of Directors recommends a vote FOR the ratification and approval  
of the amendment to the Company's 2001 Plan.**

A general description of the proposed amendments to the principal terms of the 2001 Plan is set forth below. This description is qualified in its entirety by the terms of the amended 2001 Plan, a copy of which is available to any shareholder upon request.

## General Description

As of March 1, 2005, options to purchase 4,038,833 shares had been granted under the 2001 Plan, of which options to purchase 3,766,908 shares were outstanding. As of March 1, 2005, 688,750 shares of Restricted Stock had been granted under the 2001 Plan. As of March 1, 2005, approximately 3,000 officers, employees, consultants and directors of the Company were eligible to receive grants under the 2001 Plan. As of December 31, 2004, of the remaining 2,039,892 shares available for grant, only 13,250 shares are available for restricted stock grants. As of March 1, 2005, of the remaining 1,976,842 shares available for grant, only 19,750 shares are available for restricted stock grants.

The 2001 Plan provides for the grant of Options and Restricted Stock. The maximum number of shares with respect to which Options may be granted to a Grantee during a fiscal year of the Company is 600,000 shares. In addition, in connection with a Grantee's commencement of Continuous Service to the Company, a Grantee may be granted Options for up to an additional 1,200,000 shares which shall not count against the limit set forth in the previous sentence. The foregoing limitations are subject to adjustment in the event of a stock split, stock or other extraordinary dividend, or other similar change in the Common Stock or capital structure of the Company.

The 2001 Plan is administered, with respect to grants to directors, officers, consultants, and other employees, by the plan administrator (the "Administrator"), defined as the Board or one (1) or more committees designated by the Board. With respect to grants to Officers and Directors, the Stock Option and Compensation Committee shall be constituted in such a manner as to satisfy applicable laws, including Rule 16b-3 promulgated under the Securities Exchange Act of 1934, as amended and Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code").

The Board may at any time amend, suspend or terminate the 2001 Plan. The 2001 Plan will terminate on March 16, 2011, unless earlier terminated by the Board. To the extent necessary to comply with applicable provisions of federal securities laws, state corporate and securities laws, the Code, applicable rules of any stock exchange or national market system, and the rules of any foreign jurisdiction applicable to Awards granted to residents of the jurisdiction, the Company shall obtain shareholder approval of any such amendment to the 2001 Plan in such a manner and to such a degree as required. In addition, shareholder approval is required for any amendment to the 2001 Plan that would do any of the following: expand the classes of persons to whom Awards may be issued; increase the number of shares authorized for issuance under the 2001 Plan (excluding increases due to changes in capitalization of the Company); increase the number of shares with respect to which Options may be awarded to any Grantee (excluding increases due to changes in capitalization of the Company); increase the number of shares available for Awards of Restricted Stock; permit unrestricted shares to be granted other than in lieu of cash payments under other incentive plans and programs of the Company, excluding any such incentive plan or program that is a "Retirement Plan" or "Welfare Plan" under the Employee Retirement Income Security Act of 1974, as amended; allow the creation of additional types of Awards; permit decreasing the exercise price of any Option outstanding under the 2001 Plan; or change any of the provisions of the section of the 2001 Plan relating to amending the 2001 Plan.

Options granted under the 2001 Plan may be either Incentive Stock Options under the provisions of Section 422 of the Code, or Nonstatutory Stock Options. Incentive Stock Options may be granted only to employees. Awards other than Incentive Stock Options may be granted to employees, directors and consultants. Under the 2001 Plan, Awards may be granted to such employees, directors or consultants who are residing in non-U.S. jurisdictions as the Administrator may determine from time to time.

Awards may be granted subject to vesting schedules and restrictions on transfer and repurchase or forfeiture rights in favor of the Company as specified in the Award Agreements to be issued under the 2001 Plan. Under the 2001 Plan, Incentive Stock Options may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised during the lifetime of the Grantee only by the Grantee. However, the 2001 Plan permits the designation of beneficiaries by holders of Incentive Stock Options. Other Awards shall be transferable to the extent provided in the Award Agreement.

The 2001 Plan authorizes the Administrator to select the employees, directors and consultants of the Company to whom Awards may be granted and to determine the terms and conditions of any Award; however, the term of any Option awarded under the 2001 Plan may not be for more than ten years (or five (5) years in the case of Incentive Stock Options awarded to any Grantee who owns stock representing more than ten percent (10%) of the combined voting power of the Company or any Parent or Subsidiary of the Company). The 2001 Plan authorizes the Administrator to grant Awards at an exercise price determined by the Administrator, however, the price must not be less than one hundred percent (100%) (or one hundred ten percent (110%), in the case of Incentive Stock Options granted to any Grantee who owns stock representing more than ten percent (10%) of the combined voting power of the Company or any Parent or Subsidiary of the Company) of the fair market value of the Common Stock on the date the Option is granted. The exercise price is generally payable in cash, check, shares of Common Stock or, with respect to Options, through a broker-dealer sale and remittance procedure. The aggregate fair market value of the Common Stock with respect to any Incentive Stock Options that become exercisable by an eligible employee in any calendar year may not exceed \$ 100,000 or the remaining Options shall be treated as Non-Qualified Options.

Subject to any required action by the shareholders of the Company, the number of shares of Common Stock covered by outstanding awards, the number of shares of Common Stock that have been authorized for issuance under the 2001 Plan, the exercise or purchase price of each outstanding award, the maximum number of shares of Common Stock that may be granted subject to Options to any participant in a fiscal year, and the like, shall be proportionally adjusted by the Administrator in the event of (i) any increase or decrease in the number of issued shares of Common Stock resulting from a stock split, stock dividend, combination or reclassification or similar event affecting the Common Stock of the Company, (ii) any other increase or decrease in the number of issued shares of Common Stock effected without receipt of consideration by the Company or (iii) as the Administrator may determine in its discretion, any other transaction with respect to Common Stock including a corporate merger, consolidation, acquisition of property or stock, separation (including a spin-off or other distribution of stock or property), reorganization, liquidation (whether partial or complete), distribution of cash or other assets to shareholders other than a normal cash dividend, or any similar transaction; provided, however, that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." Such adjustment shall be made by the Administrator and its determination shall be final, binding and conclusive.

The Administrator shall have the authority, exercisable either in advance of any actual or anticipated Corporate Transaction or Related Entity Disposition or at the time of an actual Corporate Transaction or Related Entity Disposition and exercisable at the time of the grant of an Award under the Plan or any time while an Award remains outstanding, to provide for the full or partial automatic vesting and exercisability of one or more outstanding unvested Awards under the Plan and the full or partial release from restrictions on transfer and repurchase or forfeiture rights of such Awards in connection with a Corporate Transaction or Related Entity Disposition, on such terms and conditions as the Administrator may specify. The Administrator also shall have the authority to condition any such Award vesting and exercisability or release from such limitations upon the subsequent termination of the Continuous Service of the Grantee within a specified period following the effective date of the Corporate Transaction or Related Entity Disposition. The Administrator may provide that any Awards so vested or released from such limitations in connection with a Related Entity Disposition shall remain fully exercisable until the expiration or earlier termination of the Award.

#### **Certain Federal Tax Consequences**

The following summary of the federal income tax consequences of 2001 Plan transactions is based upon federal income tax laws in effect on the date of this proxy statement. This summary does not purport to be complete, and does not discuss state, local or non-U.S. tax consequences.

*Nonstatutory Stock Options.* The grant of a nonstatutory stock option under the 2001 Plan will not result in any federal income tax consequences to the participant or to the Company. Upon exercise of a nonstatutory stock option, the participant is subject to income taxes at the rate applicable to ordinary compensation income on the difference between the option exercise price and the fair market value of the shares on the date of exercise. This

income is subject to withholding for federal income and employment tax purposes. The Company is entitled to an income tax deduction in the amount of the income recognized by the participant, subject to possible limitations imposed by Section 162(m) of the Code and so long as the Company withholds the appropriate taxes with respect to such income (if required) and the participant's total compensation is deemed reasonable in amount. Any gain or loss on the participant's subsequent disposition of the shares of Common Stock will receive long or short-term capital gain or loss treatment, depending on whether the shares are held for more than one year following exercise. The Company does not receive a tax deduction for any such gain.

*Incentive Stock Options.* The grant of an incentive stock option under the 2001 Plan will not result in any federal income tax consequences to the participant or to the Company. A participant recognizes no federal taxable income upon exercising an incentive stock option (subject to the alternative minimum tax rules discussed below), and the Company receives no deduction at the time of exercise. In the event of a disposition of stock acquired upon exercise of an incentive stock option, the tax consequences depend upon how long the participant has held the shares of Common Stock. If the participant does not dispose of the shares within two years after the incentive stock option was granted, nor within one year after the incentive stock option was exercised, the participant will recognize a long-term capital gain (or loss) equal to the difference between the sale price of the shares and the exercise price. The Company is not entitled to any deduction under these circumstances.

If the participant fails to satisfy either of the foregoing holding periods (referred to as a "disqualifying disposition"), he or she must recognize ordinary income in the year of the disposition. The amount of ordinary income generally is the lesser of (i) the difference between the amount realized on the disposition and the exercise price or (ii) the difference between the fair market value of the stock on the exercise date and the exercise price. Any gain in excess of the amount taxed as ordinary income will be treated as a long or short-term capital gain, depending on whether the stock was held for more than one year. The Company, in the year of the disqualifying disposition, is entitled to a deduction equal to the amount of ordinary income recognized by the participant, subject to possible limitations imposed by Section 162(m) of the Code and so long as the participant's total compensation is deemed reasonable in amount.

The "spread" under an incentive stock option — i.e., the difference between the fair market value of the shares at exercise and the exercise price — is classified as an item of adjustment in the year of exercise for purposes of the alternative minimum tax. If a participant's alternative minimum tax liability exceeds such participant's regular income tax liability, the participant will owe the larger amount of taxes. In order to avoid the application of alternative minimum tax with respect to incentive stock options, the participant must sell the shares within the calendar year in which the incentive stock options are exercised. However, such a sale of shares within the year of exercise will constitute a disqualifying disposition, as described above.

*Restricted Stock.* The grant of restricted stock will subject the recipient to ordinary compensation income on the difference between the amount paid for such stock and the fair market value of the shares on the date that the restrictions lapse. This income is subject to withholding for federal income and employment tax purposes. The Company is entitled to an income tax deduction in the amount of the ordinary income recognized by the recipient, subject to possible limitations imposed by Section 162(m) of the Code and so long as the Company withholds the appropriate taxes with respect to such income (if required) and the participant's total compensation is deemed reasonable in amount. Any gain or loss on the recipient's subsequent disposition of the shares will receive long or short-term capital gain or loss treatment depending on how long the stock has been held since the restrictions lapsed. The Company does not receive a tax deduction for any such gain. As of December 31, 2004, the weighted average number of years that a restricted stock award remains outstanding until fully vested is 3.72 years.

Recipients of restricted stock may make an election under Section 83(b) of the Code ("Section 83(b) Election") to recognize as ordinary compensation income in the year that such restricted stock is granted, the amount equal to the spread between the amount paid for such stock and the fair market value on the date of the issuance of the stock. If such an election is made, the recipient recognizes no further amounts of compensation income upon the lapse of any restrictions and any gain or loss on subsequent disposition will be long or short-term capital gain to the recipient. The Section 83(b) Election must be made within thirty days from the time the restricted stock is issued.

### Amended Plan Benefits

Subject to approval of the amendment of the 2001 Plan by the shareholders of the Company, each non-employee director will, in lieu of the historical grant of 18,000 options, be granted 5,000 shares of restricted stock on the first business day after the Annual Meeting, with one-third of the shares to vest on each yearly anniversary of the date of grant.

### Plan Cost

The Company believes, based on its analysis of a generally accepted corporate governance guideline, that its "plan cost" is approximately 0.75% below the referenced guideline.

### Overhang Analysis

	<u>December 31, 2004</u>	<u>Proforma April 29, 2005</u>
Options outstanding .....	26,705,000	26,705,000*
Options available for grant .....	<u>2,212,000</u>	<u>6,712,000</u>
	28,917,000	33,417,000
Shares outstanding .....	140,306,000	140,306,000*
Overhang .....	20.6%	23.8%
Overhang excl. stock buyback .....	18.6%	21.5%
Total shares repurchased in 2004 .....	14,800,000	

**Average Peer Group Overhang = 22.1%\*\***

\* Subject to change due to ESPP, exercises and new grants.

\*\* Selected group of semiconductor capital equipment companies as of their latest filed Annual Report on Form 10-K.

### **PROPOSAL NO. 3**

#### **RATIFICATION AND APPROVAL OF AN AMENDMENT TO THE COMPANY'S AMENDED AND RESTATED 1992 EMPLOYEE STOCK PURCHASE PLAN**

The Company's shareholders are being asked to approve an amendment to the Company's Amended and Restated 1992 Employee Stock Purchase Plan (the "Purchase Plan"). Approval of the proposal requires the affirmative vote of the holders of a majority of the shares of Common Stock present or represented and entitled to vote at the Annual Meeting. Shareholders abstaining from voting on Proposal No. 3 will be counted for purposes of determining a quorum, but will not be counted for any other purpose. Broker non-votes will not be considered as present or voting, and as such each will have no effect on the vote for this proposal.

Subject to shareholder approval, the Board of Directors of the Company amended the Purchase Plan in March 2005, to increase the number of shares reserved for issuance under the Purchase Plan by 1,000,000 shares from 4,900,000 shares to 5,900,000 shares, subject to adjustment in the event of a stock split, stock or other extraordinary dividend, or other similar change in the Common Stock or capital structure of the Company.

The Board of Directors believes that the attraction and retention of quality personnel are essential to the Company's continued growth and success and that an incentive plan such as the Purchase Plan is necessary for the Company to remain competitive in its compensation practices. The Board of Directors further believes that the Purchase Plan permits the Company to raise additional capital as well as align employee interests with those of the Company's shareholders. In the absence of an increase in the available shares, no additional shares will be available for purchase under the Purchase Plan, except to the extent that shares are not purchased during the current offering period due to the withdrawal of one or more plan participants.

**The Board of Directors recommends a vote FOR the ratification  
and approval of the amendment to the Company's Purchase Plan.**

#### **General Description of the Purchase Plan**

The following summary of the Purchase Plan, including the proposed amendment, is qualified in its entirety by the specific language of the Purchase Plan, a copy of which is available to any shareholder upon request. Capitalized terms used in this Proposal No. 3 shall have the same meaning as in the Purchase Plan unless otherwise indicated. The purpose of the Purchase Plan is to provide employees of the Company who participate in the Plan with an opportunity to purchase Common Stock of the Company through payroll deductions. The Purchase Plan, and the right of the participants to make purchases thereunder, is intended to qualify under the provisions of Sections 421 and 423 of the Code. In March 2005, subject to shareholder approval, the Board of Directors approved an amendment to the Purchase Plan increasing the number of shares available for issuance thereunder from 4,900,000 shares to 5,900,000 shares, subject to adjustment in the event of a stock split, stock or other extraordinary dividend, or other similar change in the Common Stock or capital structure of the Company. As of March 1, 2005, 4,558,836 shares of Common Stock had been sold pursuant to the Purchase Plan at a weighted average price of \$ 14.97 per share, with 341,164 shares available for future issuance under the Purchase Plan.

The following table summarizes the historical amendments to the Purchase Plan made to date:

<u>Date of Board Approval</u>	<u>Date of Shareholder Ratification</u>	<u>Date of Stock Split</u>	<u>Initial Number of Shares or Amendment to Increase Number of Shares</u>	<u>Total Number of Shares available under the Employee Stock Purchase Plan</u>
May 1992	May 1992	—	150,000	150,000
January 1995	May 1995	—	100,000	250,000
March 1996	May 1996	—	40,000	290,000
April 1997	May 1997	—	60,000	350,000
—	—	September 1997	—	700,000
March 1998	May 1998	—	250,000	950,000
February 1999	May 1999	—	350,000	1,300,000
—	—	December 1999	—	3,900,000
March 2002	May 2002	—	1,000,000	4,900,000
March 2005	April 2005*	—	1,000,000	5,900,000

\* Proposed and recommended.

Any person who is employed by the Company (or any of its majority-owned subsidiaries) for at least 20 hours per week and more than five months in a calendar year is eligible to participate in the Purchase Plan provided that the employee is employed on the first day of an offering period and subject to certain limitations imposed by Section 423(b) of the Code. Eligible employees become participants in the Purchase Plan by delivering to the Company a subscription agreement authorizing payroll deductions prior to the applicable offering date, unless a later time for filing the subscription agreement has been set by the Board of Directors for all eligible employees with respect to a given offering.

The Purchase Plan may be administered by the Board of Directors or a committee appointed by the Board, and is currently being administered by the Board of Directors. All questions of interpretation of the Purchase Plan are determined by the Board of Directors or its committee, whose decisions are final and binding upon all participants.

The Purchase Plan is implemented by one offering during each six-month period of the Purchase Plan. The Board of Directors may alter the duration of the offering periods without shareholder approval.

The price per share at which shares are sold under the Purchase Plan is equal to the lower of (i) 85% of the fair market value of the Common Stock on the date of commencement of the six-month offering period and (ii) 85% of the fair market value of the Common Stock on the last day of the offering period. The fair market value of the Common Stock on a given date is determined by the Board of Directors based upon the last sale price of the Common Stock on the Nasdaq National Market System as of such date.

The purchase price of the shares is accumulated by payroll deductions during the offering period. The deductions may not exceed the lesser of (i) 15% of a participant's eligible compensation, which is defined in the Purchase Plan to include the regular straight time gross salary in effect at the beginning of the offering period, exclusive of any payments for overtime, shift premium, bonuses, commissions, incentive compensation, incentive payments, or other compensation or (ii) \$ 5,000 for each offering period. A participant may discontinue his or her participation in the Purchase Plan or may decrease, but not increase, the rate of payroll deductions at any time during the offering period. Payroll deductions shall commence on the first payday following the offering date, and shall continue at the same rate until the end of the offering period unless terminated sooner as provided in the Purchase Plan.

The maximum number of shares placed under option to a participant in an offering is that number determined by dividing the amount of the participant's total payroll deductions to be accumulated during the

offering period (not to exceed an amount equal to 15% of the participant's actual eligible compensation during the offering period) by the lower of 85% of the fair market value of the Common Stock at the beginning or end of the offering period, provided, however, that the maximum number of shares that may be purchased by any participant under any offering is 1,000 shares. Unless a participant withdraws from the Purchase Plan, such participant's option for the purchase of shares will be exercised automatically at the end of the offering period for the maximum number of shares at the applicable price.

Notwithstanding the foregoing, (i) no employee will be permitted to subscribe for shares under the Purchase Plan if, immediately after the grant of the option, the employee would own 5% or more of the voting power or value of all classes of stock of the Company or of a parent or of any of its subsidiaries (including stock which may be purchased under the Purchase Plan or pursuant to any other options), and (ii) no employee shall be permitted to subscribe for shares which would permit the employee to buy pursuant to the Purchase Plan more than \$ 25,000 worth of stock (determined at the fair market value of the shares at the time the option is granted) in any calendar year.

A participant's interest in a given offering may be terminated in whole, but not in part, by signing and delivering to the Company a notice of withdrawal from the Purchase Plan. Such withdrawal may be elected at any time up to fifteen (15) days prior to the end of the applicable six-month offering period. Any withdrawal by the participant of accumulated payroll deductions for a given offering automatically terminates the participant's interest in that offering. The failure to remain in the continuous employ of the Company for at least 20 hours per week during an offering period will be deemed to be a withdrawal from that offering.

In the event any change is made in the Company's capitalization, such as a stock split or stock dividend, which results in an increase or decrease in the number of outstanding shares of Common Stock without receipt of consideration by the Company, appropriate adjustments will be made by the Board of Directors to the shares subject to purchase under the Purchase Plan and in the purchase price per share.

No rights or accumulated payroll deductions of a participant under the Purchase Plan may be pledged, assigned or transferred for any reason and any such attempt may be treated by the Company as an election to withdraw from the Purchase Plan.

In the event of the proposed dissolution or liquidation of the Company, the current offering will terminate immediately prior to the consummation of such proposed action, unless otherwise provided by the Board. In the event of a proposed sale of all or substantially all of the assets of the Company, or the merger of the Company with or into another corporation, each option under the Purchase Plan shall be assumed by such successor corporation or a parent or subsidiary of such successor corporation, unless the Board, in the exercise of its sole discretion and in lieu of such assumption, determines to shorten the offering then in progress by setting a new exercise date. If the Board shortens the offering then in progress in lieu of assumption, the Board shall notify each participant that the exercise date for the participant's option has been changed to the new exercise date and that either: (a) the participant's option will be exercised automatically on the new exercise date or (b) the Company shall pay to the participant on the new exercise date an amount in cash that is equal to the excess, if any, of the fair market value of the shares subject to the option over the aggregate option price as if the participant's option had been exercised.

The Board of Directors may at any time amend or terminate the Purchase Plan, except that such termination shall not affect options previously granted prior thereto which adversely affects the rights of any participant. No amendment may be made to the Purchase Plan without prior approval of the shareholders of the Company if such amendment would increase the number of shares reserved under the Purchase Plan, permit payroll deductions in excess of 15% of the participant's compensation, materially modify the eligibility requirements or materially increase the benefits which may accrue under the Purchase Plan.



### **Certain Federal Tax Consequences**

The following summarizes the federal income tax consequences of participation under the Purchase Plan and certain tax effects to the Company based upon federal income tax laws in effect on the date of this Proxy Statement. This summary does not purport to be complete, and does not discuss any non-income tax or foreign, state or local tax consequences. In addition, the discussion does not address tax consequences which may vary with, or are contingent on, a participant's individual circumstances. Any participant in the Purchase Plan is strongly urged to consult with their tax advisor about their participation in the Purchase Plan.

The Purchase Plan and the right of participants to make purchases thereunder are intended to qualify under the provisions of Section 421 and 423 of the Code. Under these provisions, no income will be taxable to a participant at the time of grant of the option or purchase of shares. Amounts deducted from a participant's pay under the Purchase Plan are part of the employee's regular compensation and remain subject to federal, state and local income and employment withholding taxes.

Upon disposition of the shares, the participant will generally be subject to tax and the amount of the tax will depend upon the participant's holding period. If the shares have been held by the participant for more than two years after the date of option grant and for more than one year from the purchase date of the shares, the lesser of (i) 15% of the fair market value of the shares on the date the option was granted or (ii) the difference between the fair market value of the shares on the date of the disposition of the shares and the purchase price will be treated as ordinary income. This amount of ordinary income will be added to a participant's basis in the shares and any further gain will be treated as a long-term capital gain. If the shares are disposed of before the expiration of the 2-year and 1-year holding periods described above, the excess of the fair market value of the shares on the exercise date over the purchase price will be treated as ordinary income. This amount of ordinary income will be added to a participant's basis in the shares and any further gain or loss on such disposition will be long-term or short-term capital gain or loss, depending on the holding period. There is no income tax withholding required upon the purchase or disposition of the shares by a participant.

The Company is not entitled to a deduction for amounts taxed as ordinary income or capital gain to a participant except to the extent of ordinary income reported by participants upon disposition of shares within two years from date of grant or within one tax year of the date of purchase (subject to the requirements of reasonableness). The Company is required to report to the United States Internal Revenue Service any ordinary income recognized by a participant as a result of a disposition if such information is available to the Company.

### **Amended Plan Benefits**

As of the date of this Proxy Statement, no executive officer or employee of the Company has been granted any rights to purchase stock pursuant to the Purchase Plan subject to shareholder approval of the proposed amendment. The benefits to be received pursuant to the Purchase Plan amendment by the Company's executive officers and employees are not determinable at this time.

## PROPOSAL NO. 4

### RATIFICATION AND APPROVAL OF APPOINTMENT OF INDEPENDENT AUDITORS

The Audit Committee has selected Ernst & Young LLP, an independent registered public accounting firm, to audit the financial statements of the Company for the year ending December 31, 2005 and the Board of Directors recommends that the shareholders ratify such selection. Unless otherwise instructed, the proxy holders will vote the proxies they receive FOR the ratification of Ernst & Young LLP as the independent auditors for the year ending December 31, 2005. Ratification and approval of this proposal requires the affirmative vote of a majority of the outstanding shares of the Company's Common Stock present in person or represented by proxy and entitled to vote at the Annual Meeting. In the event that a majority of the shares present or represented and entitled to vote are not voted in favor of ratification, the Audit Committee will reconsider its selection. Representatives of Ernst & Young LLP will be present at the Annual Meeting, will have the opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Ernst & Young LLP has audited the Company's financial statements since the year ended December 31, 1986.

#### Audit and Non-Audit Fees

The following table presents fees for professional audit services rendered by Ernst & Young LLP for the audit of the Company's annual financial statements for the years ended December 31, 2004 and December 31, 2003 and fees billed for other services rendered by Ernst & Young LLP during those periods.

	<u>Fiscal 2004</u>	<u>Fiscal 2003</u>
Audit Fees (1)		
Audit .....	\$ 1,198,000	\$ 905,500
Sarbanes-Oxley related fees .....	<u>863,000</u>	<u>7,500</u>
	\$ 2,061,000	\$ 913,000
Audit-Related Fees (2) .....	224,000	97,000
Tax Fees (3)		
Tax Compliance Fees .....	\$ 1,148,000	\$ 1,075,000
Tax Planning and Advisory .....	<u>817,000</u>	<u>482,000</u>
	\$ 1,965,000	\$ 1,557,000
All Other Fees (4) .....	<u>12,000</u>	<u>79,000</u>
Total(5) .....	\$ 4,262,000	\$ 2,646,000

- (1) Audit Fees consist of fees billed for professional services rendered for the audit of the Company's consolidated annual financial statements and review of the interim consolidated financial statements included in quarterly reports and services that are normally provided by Ernst & Young LLP in connection with statutory and regulatory filings or engagements. In addition, in 2004, audit fees include those fees related to Ernst & Young LLP's audit of the effectiveness of the Company's internal controls over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act.
- (2) Audit-Related Fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements and are not reported under "Audit Fees."
- (3) Tax Fees consist of fees billed for professional services rendered for tax compliance, tax advisory and tax planning (domestic and international). These services include assistance regarding federal, state and international tax compliance and tax planning.
- (4) All Other Fees consist of fees for services other than the services reported above. In making its recommendation to ratify the appointment of Ernst & Young LLP as the Company's independent auditors for the fiscal year ending December 31, 2005, the Audit Committee has considered whether services other than

audit and audit-related services provided by Ernst & Young LLP are compatible with maintaining the independence of Ernst & Young LLP and has determined that such services are so compatible.

- (5) For Fiscal 2004, the percentage of total fees paid to Ernst & Young LLP attributable to Tax Planning and Advisory Fees and All Other Fees was 19.5%. For Fiscal 2003, the percentage of total fees paid to Ernst & Young LLP attributable to Tax Planning and Advisory Fees and All Other Fees was 21.2%.

**Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors**

The Audit Committee's policy is to pre-approve all audit and permissible non-audit services provided by the Company's independent auditors. These services may include audit services, audit-related services, tax services and other services. Pre-approval is generally provided for up to one year and any pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. The independent auditors and management are required to periodically report to the Audit Committee regarding the extent of services provided by the independent auditors in accordance with this pre-approval, and the fees for the services performed to date. The Audit Committee may also pre-approve particular services on a case-by-case basis.

**The Board of Directors recommends a vote FOR the ratification of Ernst & Young LLP as the Company's independent auditors for the year ending December 31, 2005.**

## OTHER INFORMATION

### Executive Officers

In addition to Mr. Hill, the executive officers of the Company as of March 1, 2005, were as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Gino Addiego .....	45	Senior Vice President of Corporate Operations
Jeffrey C. Benzing .....	48	Executive Vice President, Chief Business Officer
Fusen Chen .....	45	Senior Vice President of Asia-Pacific Operations
John Chenault .....	57	Vice President, Corporate Development
Kevin Royal .....	40	Vice President, Chief Financial Officer
Thomas St. Dennis .....	51	Executive Vice President of Sales, Worldwide Service and Marketing
Sasson Somekh .....	59	President
Wilbert van den Hoek .....	48	Executive Vice President, Chief Technical Officer

*Mr. Addiego* joined the Company in February 2005 as Senior Vice President of Corporate Operations. From November 1996 to February 2005, Mr. Addiego was employed at Applied Materials, Inc. where he last served as Senior Vice President, Foundation Engineering and Operations. From March 1995 to November 1996, Mr. Addiego was employed at KLA Instruments Incorporated where he served as Vice President of Engineering, Advanced Inspection Division. Mr. Addiego was employed by Photon Dynamics Incorporated from 1990 to February 1995, where he last served as Vice President, General Manager of Test and Repair Products. Mr. Addiego holds a Bachelor of Science and a Ph.D. in Electrical Engineering from the University of California at Berkeley.

*Mr. Benzing* is currently Executive Vice President and Chief Business Officer, a position he has held since March 2004. He joined the Company in November 1988 as Director of Special Projects. From July 1992 through June 1999, he served as the Company's Vice President in charge of Product Development, from July 1999 through December 2001, he served as Executive Vice President, Systems Development, Engineering and Manufacturing Operations and from January 2002 through February 2004, he served as Executive Vice President of the Deposition Business Group. From 1984 to 1988, Mr. Benzing was Vice President of Engineering of Benzing Technologies, a company that he co-founded. From 1979 to 1984, Mr. Benzing served in various positions at Hewlett Packard Company. Mr. Benzing holds a Bachelor of Science degree from the University of California, Berkeley and a Masters of Science degree from Stanford University, both in mechanical engineering.

*Mr. Chen* joined the Company as Senior Vice President of Asia-Pacific Operations in October 2004. From January 1994 to September 2004, Mr. Chen was employed at Applied Materials, Inc. as the Group Vice President and General Manager for the Copper Physical Vapor Deposition (PVD) & Interconnect Product Business Group. Prior to joining Applied Materials, Inc., Mr. Chen worked at LSI Logic and SGS-Thomson Microelectronics. Mr. Chen received his Bachelor of Science degree in Materials Science & Engineering from the National Tsing Hua University in Taiwan and his doctorate in Materials Science & Engineering from the State University of New York at Stony Brook. He holds more than 60 U.S. patents and has authored over 50 technical publications.

*Mr. Chenault* is currently Vice President, Corporate Development. Mr. Chenault joined the Company in September 1991 as Vice President, Operations. From April 1993 through April 1996, he served as Vice President, Customer Satisfaction. From May 1996 to June 1997, he served as the Executive Vice President, Operations, and then as Executive Vice President, Business Operations until January 2002 when he was named Executive Vice President of Worldwide Sales and Service. From September 2003 to February 2005, Mr. Chenault served as Vice President of Operations and Administration. From October 1988 to July 1991, he was Vice President and General Manager of Veeco Instruments, an electronics company. From 1986 to October 1988, Mr. Chenault was Vice

President and General Manager for Carroll Touch, a subsidiary of AMP, Inc., an electronics company. Mr. Chenault has also held various positions with Texas Instruments, Inc. and Recognition Equipment, Inc. Mr. Chenault holds a Bachelor of Business degree in Economics and a Masters degree in Business Administration from Western Illinois University.

*Mr. Royal* was promoted to the position of Chief Financial Officer for the Company in January 2002. Mr. Royal joined the Company in 1996 and has held various senior finance positions, the most recent being Vice President Finance, Corporate Controller. Prior to joining the company, Mr. Royal was with Ernst & Young LLP, in their Northern California high technology practice for over ten years. Mr. Royal received his Bachelor of Business Administration from Harding University and is a Certified Public Accountant in the state of California.

*Mr. Somekh* joined the Company in January 2004 as President, and member of the Office of the CEO. Mr. Somekh's responsibilities include spearheading new product development and the Company's product line business units. Prior to joining the Company, Mr. Somekh worked for 23 years at Applied Materials, Inc., where he held several management positions, including Executive Vice President, Chairman of the Executive Committee. Mr. Somekh is also a member of the board of directors of Synopsys, a provider of electronic design automation, and Nanosys, a nanotechnology company. Mr. Somekh received his Ph.D. in Electrical Engineering from the California Institute of Technology.

*Mr. St. Dennis* joined the Company in July 2003 as Executive Vice President, Sales, Worldwide Service & Marketing, and member of the Office of the CEO. Mr. St. Dennis was President and Chief Executive Officer and a member of the board of directors of Wind River Systems, Inc., a supplier of embedded software and services, from September 1999 through June 2003. From July 1992 to September 1999, Mr. St. Dennis was employed at Applied Materials, Inc., where he last served as Group Vice President and President of the Planarization and Dielectric Deposition Products Business Group. From 1987 to 1992, Mr. St. Dennis was Vice President of Technology at the Silicon Valley Group, Inc., a semiconductor equipment manufacturer. From 1983 to 1987, he served as Vice President of Sales and Marketing at Semiconductor Systems, Inc., a semiconductor company. Mr. St. Dennis holds Bachelor of Science and Masters degrees in Physics from the University of California at Los Angeles.

*Mr. van den Hoek* joined the Company in May 1990 as Director of Technology of Nippon Novellus Systems. From April 1996 through May 1997, he served as Vice President, HDP-CVD Business Unit. From June 1997 through June 1999, he served as Vice President, Dielectric Business Unit and is currently Executive Vice President, Chief Technical Officer. Since February 2005, Mr. van den Hoek has also served as President and Chief Executive Officer of Novellus Development Company. From 1980 to May 1990, he held a variety of positions at the Philips Research Laboratories in Eindhoven, The Netherlands and Sunnyvale, California. The last position Mr. van den Hoek held at Philips Research Laboratories was group manager of the Si Technology Research Group. Mr. van den Hoek is also a member of the board of directors of Semiconductor Research Corporation. Mr. van den Hoek received a Doctorandus in Chemistry from Rijks Universiteit Utrecht, The Netherlands.

Officers serve at the discretion of the Board of Directors until their successors are appointed. There are no family relationships among the Company's executive officers or directors.

## Executive Compensation

### Summary Compensation Table

The following table sets forth certain information concerning compensation of the Chief Executive Officer and the four other most highly compensated executive officers of the Company serving as executive officers on December 31, 2004 whose aggregate cash compensation exceeded \$100,000 during the year ended December 31, 2004 (collectively, the "named executive officers").

Name and Principal Position	Year	Annual Compensation		Long-Term Compensation Awards		All Other Compensation (\$)
		Salary \$(1)	Bonus (\$)	Restricted Stock Award(s) (\$)	Securities Underlying Options/SARs (#)(2)	
Richard S. Hill ..... <i>Chairman of the Board and Chief Executive Officer</i>	2004	774,231	1,076,880	2,343,000 (3)(4)	350,000	30,852 (5)
	2003	750,000	—	—	—	29,630 (5)
	2002	709,615	449,247	1,462,000 (6)	300,000	24,779 (5)
Sasson Somekh (7) ..... <i>President</i>	2004	423,846	593,110	2,389,185 (4)(8)(9)(10)(11)	412,500	3,906 (12)
Thomas St. Dennis (13) .. <i>Executive Vice President</i>	2004	380,000	349,594	762,685 (4)(8)(14)(15)	112,500	1,960 (16)
	2003	175,384	100,000 (17)	1,825,000 (18)	150,000	905 (16)
Jeffrey C. Benzing ..... <i>Executive Vice President</i>	2004	330,000	286,080	364,890 (4)(8)(19)(20)	70,000	12,740 (21)
	2003	328,789	—	—	—	10,946 (21)
	2002	273,490	48,344	146,200 (22)	100,000	9,195 (21)
Wilbert van den Hoek ... <i>Executive Vice President</i>	2004	319,385	296,522	692,910 (4)(8)(23)(24)	87,500	5,201 (25)
	2003	299,596	—	—	—	5,042 (25)
	2002	273,490	60,149	146,200 (26)	100,000	4,895 (25)

- (1) With regard to fiscal year 2004 salary: (a) Mr. Hill received an 3.3% salary increase in January 2004 and an 8% salary increase in December 2004 and (b) each of the other executive officers listed above received various salary increases ranging from 4% to 12% in December 2004. The December 2004 salary increases were effective December 11, 2004.
- (2) Amounts represent stock option grants. See Option/SAR Grants in Last Fiscal Year table.
- (3) Represents a total of 75,000 shares granted to Mr. Hill on June 11, 2004 pursuant to a Restricted Stock Award Agreement.
- (4) Value is based on the price of the Company's Common Stock on June 11, 2004 (\$ 31.24). 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue and the remaining 50% will vest on June 11, 2009. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, 100% of the shares will vest on June 11, 2009.
- (5) Represents \$ 2,070, \$ 4,002, and \$ 3,779 in life insurance premiums paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. Hill, \$ 28,782, \$ 25,112, and \$ 21,000 in tax preparation and financial advisory fees paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. Hill, and \$ 516 in country club membership dues reimbursed to Mr. Hill in 2003.
- (6) Represents a total of 50,000 shares granted to Mr. Hill pursuant to a Restricted Stock Award Agreement. Value is based on the price of the Company's Common Stock on December 13, 2002 (\$ 29.24). 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue and the remaining 50% will vest on December 13, 2007. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, 100% of the shares will vest on December 13, 2007.

- (7) Mr. Somekh joined the Company in January 2004.
- (8) Value is based on the price of the Company's Common Stock on December 9, 2004 (\$ 27.91). 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue and the remaining 50% will vest on December 9, 2009. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, 100% of the shares will vest on December 9, 2009.
- (9) Represents a total of 50,000 shares granted to Mr. Somekh pursuant to a Restricted Stock Award Agreement. Value is based on the price of the Company's Common Stock on January 29, 2004 (\$ 32.53). 20% of the shares vest on January 26 of each year, beginning on January 26, 2005.
- (10) Represents a total of 19,500 shares granted to Mr. Somekh on June 11, 2004 pursuant to a Restricted Stock Award Agreement.
- (11) Represents a total of 5,500 shares granted to Mr. Somekh on December 9, 2004 pursuant to a Restricted Stock Award Agreement.
- (12) Represents \$ 3,906 in life insurance premiums paid in 2004 by the Company on behalf of Mr. Somekh.
- (13) Mr. St. Dennis joined the Company in July 2003.
- (14) Represents a total of 19,500 shares granted to Mr. St. Dennis on June 11, 2004 pursuant to a Restricted Stock Award Agreement.
- (15) Represents a total of 5,500 shares granted to Mr. St. Dennis on December 9, 2004 pursuant to a Restricted Stock Award Agreement.
- (16) Represents \$ 1,960 and \$ 905 in life insurance premiums paid in 2004 and 2003, respectively, by the Company on behalf of Mr. St. Dennis.
- (17) Represents \$ 100,000 year-end bonus.
- (18) Represents a total of 50,000 shares granted to Mr. St. Dennis pursuant to a Restricted Stock Purchase Agreement. Value is based on the price of the Company's Common Stock at July 17, 2003 (\$ 36.50). 20% of the shares vest on July 8th of each year, beginning on July 8, 2004.
- (19) Represents a total of 9,000 shares granted to Mr. Benzing on June 11, 2004 pursuant to a Restricted Stock Award Agreement.
- (20) Represents a total of 3,000 shares granted to Mr. Benzing on December 9, 2004 pursuant to a Restricted Stock Award Agreement.
- (21) Represents \$ 1,098, \$ 1,092 and \$ 895 in life insurance premiums paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. Benzing, and \$ 11,642, \$ 9,854 and \$ 8,300 in tax preparation and financial advisory fees paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. Benzing.
- (22) Represents a total of 5,000 shares granted to Mr. Benzing pursuant to a Restricted Stock Award Agreement. Value is based on the price of the Company's Common Stock on December 13, 2002 (\$ 29.24). 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue and the remaining 50% will vest on December 13, 2007. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, 100% of the shares will vest on December 13, 2007.
- (23) Represents a total of 19,500 shares granted to Mr. Van den Hoek on June 11, 2004 pursuant to a Restricted Stock Award Agreement.
- (24) Represents a total of 3,000 shares granted to Mr. Van den Hoek on December 9, 2004 pursuant to a Restricted Stock Award Agreement.
- (25) Represents \$ 1,059, \$ 988 and \$ 895 in life insurance premiums paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. van den Hoek, and \$ 4,142, \$ 4,054 and \$ 4,000 in tax preparation and financial advisory fees paid in 2004, 2003 and 2002, respectively, by the Company on behalf of Mr. van den Hoek.
- (26) Represents a total of 5,000 shares granted to Mr. van den Hoek pursuant to a Restricted Stock Award Agreement. Value is based on the price of the Company's Common Stock on December 13, 2002 (\$ 29.24). 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue

and the remaining 50% will vest on December 13, 2007. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, 100% of the shares will vest on December 13, 2007.

#### Option/SAR Grants in Fiscal Year 2004

The following table provides certain information with respect to stock options granted to the named executive officers during the fiscal year ended December 31, 2004:

	Number of Securities Underlying Options Granted	Percent of Total Options Granted to Employees (1)	Exercise Price Per Share	Expiration Date	Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation for Option Term (2)	
					5%	10%
Richard S. Hill . . . . .	150,000	2.88%	\$ 31.24	06/11/14	\$ 2,947,000	\$ 7,468,277
	200,000	3.85%	\$ 27.81	12/10/14	3,497,912	8,864,396
Sasson Somekh . . . . .	250,000	4.80%	\$ 32.53	01/29/14	5,114,486	12,961,111
	37,500	0.72%	\$ 31.24	06/11/14	736,750	1,867,069
	125,000	2.40%	\$ 27.91	12/09/14	2,194,056	5,560,169
Thomas St. Dennis . . . . .	37,500	0.72%	\$ 31.24	06/11/14	736,750	1,867,069
	75,000	1.44%	\$ 27.91	12/09/14	1,316,434	3,336,101
Jeffrey C. Benzing . . . . .	20,000	0.38%	\$ 31.24	06/11/14	392,933	995,770
	50,000	0.96%	\$ 27.91	12/09/14	877,622	2,224,068
Wilbert van den Hoek . . .	37,500	0.72%	\$ 31.24	06/11/14	736,750	1,867,069
	50,000	0.96%	\$ 27.91	12/09/14	877,622	2,224,068

- (1) Based on a total of 5,198,270 options granted to employees of the Company in 2004, including the named executive officers.
- (2) The potential realizable value portion of the foregoing table illustrates value that might be realized upon exercise of the options immediately prior to the expiration of their terms, assuming the specified compounded rates of appreciation on the Company's Common Stock over the term of the options. Actual gains, if any, on stock option exercise are dependent upon a number of factors, including the future performance of the Common Stock, overall stock market conditions and the timing of option exercises, if any. There can be no assurance that amounts reflected in this table will be achieved.



**Aggregated Option/SAR Exercises in Last Fiscal Year  
and Fiscal Year-End Option/SAR Values**

The following table sets forth certain information with respect to stock options exercised by the named executive officers during the fiscal year ended December 31, 2004, including the aggregate value of gains on the date of exercise. In addition, the table sets forth the number of shares covered by stock options as of December 31, 2004, and the value of "in-the-money" stock options, which represents the positive spread between the exercise price of a stock option and the market price of the shares subject to such option on December 31, 2004.

Name	Shares Acquired On Exercise (#)	Value Realized	Number of Securities Underlying Unexercised Options at December 31, 2004		Value of Unexercised In-the-Money Options at December 31, 2004 (1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Richard S. Hill .....	—	—	1,059,035	574,999	\$ 1,184,357	\$ 16,000
Sasson Somekh .....	—	—	—	412,500	—	—
Thomas St. Dennis .....	—	—	37,500	225,000	—	—
Jeffrey C. Benzing .....	82,000	\$ 1,319,019	380,870	151,250	464,840	—
Wilbert van den Hoek ...	—	—	584,300	181,250	2,715,845	—

(1) Calculated on the basis of the last reported sale price per share for the Company's Common Stock on the Nasdaq National Market System of \$ 27.89 on December 31, 2004.

**Equity Compensation Plan Information**

The following table gives information about the Company's Common Stock that may be issued upon the exercise of options, warrants and rights under all of the Company's existing equity compensation plans as of December 31, 2004, including the Amended and Restated 1992 Stock Option Plan, the Amended and Restated 1992 Employee Stock Purchase Plan, the 2001 Stock Incentive Plan, the 2001 Non-Qualified Stock Option Plan, as amended, and the option plans and agreements assumed by the Company in connection with the acquisitions of GaSonic International Corporation (the "GaSonic Acquisition") and SpeedFam-IPEC, Inc. (the "SpeedFam-IPEC Acquisition").

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants, and rights	(b) Weighted-average exercise price of outstanding options, warrants, and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders (1) .....	14,633,179	\$ 30.64	2,381,056
Equity compensation plans not approved by security holders (2)(3)(4)(5) .....	12,071,687	\$ 34.54	172,424
Total .....	26,704,866	\$ 32.40	2,553,480

(1) Represents shares of the Company's Common Stock issuable pursuant to the Company's Amended and Restated 1992 Stock Option Plan, Amended and Restated 1992 Employee Stock Purchase Plan, and 2001 Stock Incentive Plan.

The Amended and Restated 1992 Stock Option Plan (the "1992 Plan") was originally adopted by the Board of Directors in April 1992 and was approved by the shareholders in May 1992. The Board adopted amendments and restatements of the 1992 Plan in 1993, 1995, 1996, 1997, 1998 and 1999. These amendments and restatements were approved by the shareholders in 1994, 1995, 1996, 1997, 1998 and 2000. The 1992 Plan is administered by the Stock Option and Compensation Committee. Options granted

pursuant to the 1992 Plan generally vest ratably over a four-year period on the anniversary of the date of grant or as determined by the Stock Option and Compensation Committee. Stock options expire ten years after the date of grant. The 1992 Plan expired in 2002 and options are no longer granted under the 1992 Plan. As of December 31, 2004, there were options outstanding to purchase 10,935,821 shares of the Company's Common Stock under the 1992 Plan at a weighted average exercise price of \$ 31.23 per share and no shares available for future issuance.

The Amended and Restated 1992 Employee Stock Purchase Plan (the "1992 ESPP") was originally adopted by the Board and approved by the shareholders in May 1992. Amendments and restatements of the 1992 ESPP were adopted by the Board and approved by the shareholders in 1995, 1996, 1997, 1998, 1999 and 2002. The purpose of the 1992 ESPP is to provide participating employees of the Company with an opportunity to purchase Common Stock of the Company through payroll deductions. The 1992 ESPP, and the right of participants to make purchases thereunder, is intended to qualify under the provisions of Sections 421 and 423 of the Internal Revenue Code of 1986, as amended. The 1992 ESPP is implemented by one offering during each six-month period. The Board of Directors may alter the duration of the offering periods without shareholder approval. The price per share at which shares are sold under the 1992 ESPP is equal to the lower of (i) 85% of the fair market value of the Common Stock on the date of commencement of the six-month offering period, or (ii) 85% of the fair market value of the Common Stock on the last day of the offering period. The fair market value of the Common Stock on a given date is determined by the Board of Directors based upon the last sale price of the Common Stock on the Nasdaq National Market System as of such date. The purchase price of the shares is accumulated by payroll deductions during the offering period. The deductions may not exceed the lesser of (i) 15% of a participant's eligible compensation, which is defined in the 1992 ESPP to include the regular straight time gross salary in effect at the beginning of the offering period, exclusive of any payments for overtime, shift premium, bonuses, commissions, incentive compensation, incentive payments, or other compensation, or (ii) \$ 5,000 for each offering period. A participant may purchase no more than 1,000 shares in any one offering period. As of December 31, 2004, there were 341,164 shares available for future issuance under the 1992 Plan.

The 2001 Stock Incentive Plan (the "2001 Plan") was originally adopted by the Board of Directors in March 2001 and approved by the shareholders in May 2001. The 2001 Plan is administered by the Stock Option and Compensation Committee. Options granted pursuant to the 2001 Plan generally vest ratably over a four-year period on the anniversary of the date of grant or as determined by the Stock Option and Compensation Committee. Options expire ten years after the date of grant. The stock options issued under the 2001 Plan have an exercise price of not less than 100% of the fair market value of the Common Stock on the date of grant of the option. Options are generally non-transferable. As of December 31, 2004, there were options outstanding to purchase 3,697,358 shares of the Company's Common Stock under the 2001 Plan at a weighted average exercise price of \$ 28.88 per share and 2,039,892 shares available for future issuance.

- (2) Includes 670,478 shares of the Company's Common Stock issuable pursuant to option plans and agreements assumed pursuant to the GaSonics Acquisition and 10,219 shares of the Company's Common Stock available for future issuance pursuant to option plans assumed pursuant to the GaSonics Acquisition. The option agreements were originally issued by GaSonics under the GaSonics International Corporation 1994 Stock Option/Stock Issuance Plan, the Gamma Precision Technology 1998 Stock Option Plan and the GaSonics International Corporation 2000 Supplemental Stock Option Plan (collectively, the "GaSonics Plans"), which are described below.

Pursuant to the GaSonics Acquisition, the Company assumed the option agreements then outstanding under the GaSonics Plans (the "GaSonics Assumed Options"). The GaSonics Assumed Options are governed by the terms of the respective GaSonics Plan under which they were originally issued. In addition, any future options issued under the GaSonics Plans will be governed by the respective plan under which such options are issued. Options governed by the terms of the GaSonics Plans generally are non-transferable (with the exception of non-qualified stock options, which may be assigned) and expire no later than ten years from date of grant. Options generally are exercisable immediately, upon vesting. Shares of Common Stock issuable and/or exercised under the GaSonics Plans vest based upon years of service, generally four years.

The GaSonics Plans, other than the Gamma Precision Technology 1998 Stock Option Plan, which was assumed by GaSonics when GaSonics acquired Gamma Precision Technology, were duly approved by the shareholders of GaSonics prior to the GaSonics Acquisition.

- (3) Includes 1,024,469 shares of the Company's Common Stock issuable pursuant to option plans and agreements assumed pursuant to the SpeedFam-IPEC Acquisition and 24,242 shares of the Company's Common Stock available for future issuance pursuant to option plans assumed pursuant to the SpeedFam-IPEC Acquisition. The option agreements were originally issued by SpeedFam-IPEC under the SpeedFam, Inc. 1991 Employee Incentive Stock Option Plan, as amended, the SpeedFam-IPEC, Inc. 1992 Stock Option Plan, as amended, the 1995 Stock Plan for Employees and Directors of SpeedFam-IPEC International, Inc., as amended, the 2001 Nonstatutory Stock Option Plan of SpeedFam-IPEC, Inc., and the Stand-Alone Nonstatutory Stock Option Agreement of SpeedFam-IPEC, Inc., dated June 14, 2001 (collectively, the "SpeedFam-IPEC Plans"), which are described below.

Pursuant to the SpeedFam-IPEC Acquisition, the Company assumed the option agreements then outstanding under the SpeedFam-IPEC Plans (the "SpeedFam-IPEC Assumed Options"). The SpeedFam-IPEC Assumed Options are governed by the terms of the respective SpeedFam-IPEC Plan under which they were originally issued. In addition, any future options issued under the SpeedFam-IPEC Plans will be governed by the respective plan under which such options are issued. Options governed by the terms of the SpeedFam-IPEC Plans generally are non-transferable and expire no later than ten years from date of grant. Options generally are exercisable immediately, upon vesting. Shares of Common Stock issuable and/or exercised under the SpeedFam-IPEC Plans vest based upon years of service, generally four years. The SpeedFam-IPEC Plans, other than the 2001 Nonstatutory Stock Option Plan of SpeedFam-IPEC, Inc. and the Stand-Alone Nonstatutory Stock Option Agreement of SpeedFam-IPEC, Inc., dated June 14, 2001, were duly approved by the shareholders of SpeedFam-IPEC prior to the SpeedFam-IPEC Acquisition.

- (4) Includes 10,126,740 shares of the Company's Common Stock issuable pursuant to option plans and agreements and 137,963 shares of the Company's Common Stock available for future issuance pursuant to the Company's 2001 Non-Qualified Stock Option Plan, which is described below.

The Board of Directors adopted the 2001 Non-Qualified Stock Option Plan (the "2001 Non-Qualified Plan") in December 2001. The 2001 Non-Qualified Plan is administered by the Stock Option and Compensation Committee. Pursuant to the 2001 Non-Qualified Plan, the Stock Option and Compensation Committee may grant non-qualified stock options, at its discretion, to employees, independent contractors and consultants of the Company or any parent or subsidiary corporation of the Company. Only non-qualified stock options may be issued under the 2001 Non-Qualified Plan. Stock options may not be granted to officers and directors of the Company from the 2001 Non-Qualified Plan. Stock options shall be issued under the 2001 Non-Qualified Plan with an exercise price of not less than 100% of the fair market value of the Common Stock on the date of grant of the option. Options are generally non-transferable. The term of all options granted under the Plan shall not exceed ten years from the date of grant.

- (5) Includes 250,000 shares of the Company's Common Stock issuable pursuant to the grant of an employment inducement stock option to Sasson Somekh, who joined the Company in January 2004.

### **Employment Agreements**

*Richard S. Hill.* Effective as of March 11, 2005, the Company entered into an amended and restated employment agreement with Richard S. Hill, who is currently serving as the Company's Chairman and Chief Executive Officer. This agreement amends and restates in its entirety Mr. Hill's prior employment agreement dated as of October 1, 1998, as amended December 17, 1999 and January 14, 2004.

The current agreement provides for an initial employment term through December 31, 2006, with automatic renewals for successive two year periods if Mr. Hill continues to serve on the last day of each term. The agreement further provides that Mr. Hill will receive a base salary of \$ 840,000 per annum and will be eligible to participate in the Company's existing executive bonus plan.

In addition, Mr. Hill will be entitled to receive certain benefits and/or payments in connection with the termination of the agreement. These benefits and/or payments will vary depending upon whether termination of the agreement occurs as a result of Mr. Hill's death, disability, resignation for "Good Reason," or termination "Not for Cause" (all as defined in the agreement). If the agreement is terminated by reason of Mr. Hill's death, the Company will continue to pay salary and benefits to Mr. Hill's estate through the second full month after his death. If the agreement is terminated by reason of Mr. Hill's disability, as defined therein, the Company will continue to employ Mr. Hill at 66 2/3% of his base salary at the time of disability and shall include Mr. Hill in the Company's health insurance benefit plans until he reaches age 65. If the Company terminates the agreement Not for Cause or if Mr. Hill resigns for Good Reason, Mr. Hill will be entitled to receive (i) the greater of a severance payment equal to two years of his then current base salary, or his base salary through the expiration date of the agreement, which shall be payable in the form of salary continuation for two years on the Company's normal payroll schedule; (ii) annual bonus payments equal to 150% of his then current base annual salary during the salary continuation period, payable in any year in which the Company pays any bonuses to any other employees; (iii) payment of health insurance premiums in accordance with the Company's officer retirement health benefit program without regard to any age or length of service limitations for that program; (iv) continued vesting of his stock options through the salary continuation period, with vested options to be exercised within three years following the end of such period, during which time Mr. Hill will serve as a consultant; and (v) immediate vesting of his restricted stock award such that the Company's right to repurchase such restricted stock shall immediately lapse. Payments during this salary continuation period are conditioned upon Mr. Hill's observance of obligations not to compete with the Company's business. Mr. Hill's right to terminate for Good Reason shall continue for two years following a "Change of Control" (as defined in the agreement) in which he accepts a position with the Company or its successor, other than as chairman and chief executive officer. Mr. Hill's Change of Control payments and benefits may be reduced such that they would not constitute a "parachute payment" within the meaning of Section 280G of the Code, or be subject to the excise tax imposed by Section 4999 of the Code. If the Company terminates the agreement for "Cause" (as defined in the agreement), or if Mr. Hill terminates Not for Cause, no further rights to compensation or benefits will accrue to Mr. Hill, except that in a termination Not for Cause (i) Mr. Hill and his qualified dependents shall receive continued health insurance coverage under the Company's officer retirement health benefit program, without regard to any age or length of service limitations for that program and (ii) if Mr. Hill is age fifty-five or older, he will receive a payment equal to twenty-four times his highest base monthly salary and an additional payment calculated according to the schedule set forth in the agreement. If Mr. Hill terminates his employment Not for Cause or retires after being disabled he will also receive the benefits he is entitled to under the Company's July 1993 Board of Directors' Resolution Regarding Officer's Retirement, Medical and Dental Coverage; these may include lifetime health insurance for himself and his qualified dependents.

*Sasson Somekh.* In January 2004, the Company entered into an employment agreement with Mr. Somekh pursuant to which the Company retained Mr. Somekh as President for an annual base salary (subject to adjustment) of \$ 475,000. As of the end of 2004, Mr. Somekh's annual base salary was adjusted to \$ 520,000. The Company will also pay one hundred percent of the cost of coverage for Mr. Somekh and a portion of the cost of coverage for Mr. Somekh's dependents in accordance with the terms of the Company's health, dental, vision, life and long-term disability insurance programs. As a senior member of the Company's executive team, Mr. Somekh is entitled to unlimited use of the Company's executive financial counselors at no cost to Mr. Somekh for the course of his employment at the Company and to the use of Ernst & Young LLP to prepare his personal tax returns.

*Thomas St. Dennis.* In June 2003, the Company entered into an employment agreement with Mr. St. Dennis pursuant to which the Company retained Mr. St. Dennis as Executive Vice President, Sales & Marketing, for an annual base salary (subject to adjustment) of \$ 380,000. As of the end of 2004, Mr. St. Dennis' annual base salary was adjusted to \$ 425,000. The Company also agreed to pay life insurance policy premiums in the amount of \$ 75,000 per year for two years and one hundred percent of the cost of coverage for Mr. St. Dennis and a portion of the cost of coverage for Mr. St. Dennis' dependents in accordance with the terms of the Company's health, dental, vision, life and long-term disability insurance programs. As a senior member of the Company's executive team, Mr. St. Dennis is also entitled to unlimited use of the Company's executive financial counselors at no cost to Mr. St. Dennis.

### **Certain Relationships and Related Transactions**

The Company leases an aircraft from a third-party entity wholly owned by Richard S. Hill, the Company's Chairman and Chief Executive Officer. Under the aircraft lease agreement, the Company incurred lease expense of \$ 918,230, \$ 789,025 and \$ 202,205 for the years ended December 31, 2004, 2003 and 2002, respectively. As part of the Company's internal audit plan, in January 2004, the Audit Committee authorized the Company's internal audit function to conduct a study of lease rates for similar aircraft. The results of this study confirmed that rates charged by the third-party entity would be comparable to amounts charged by third-party commercial charter companies for similar aircraft.

Mr. Hill is a member of the Board of Directors of the University of Illinois Foundation. The Company regularly provides research funding to certain groups, and the Company provided research grants to the University of Illinois and certain of its professors in the amount of \$ 100,000 in each of the years ended December 31, 2004, 2003 and 2002, respectively.

Mr. Hill is also a member of the Board of Directors of LTX Corporation. The Company recorded sublease income from LTX Corporation of \$ 1,402,790, \$ 1,402,790, and \$ 1,119,398 for the years ended December 31, 2004, 2003 and 2002, respectively.

During each of the years ended December 31, 2004, 2003 and 2002 the Company employed, in non-executive positions, an immediate family member of each of Richard S. Hill, Jeffrey C. Benzing and Wilbert van den Hoek, executive officers of the Company. The aggregate salary, bonus and profit-sharing amounts excluding any perquisites paid to the three immediate family members during the years ended December 31, 2004, 2003 and 2002 were \$ 515,400, \$ 466,418 and \$ 402,959 respectively.

*Notwithstanding anything to the contrary set forth in any of the Company's previous filings under the Securities Act of 1933, as amended (the "Securities Act"), or the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that might incorporate future filings, including this Proxy Statement, in whole or in part, the following Stock Option and Compensation Committee Report, the Audit Committee Report and the Performance Graph shall not be deemed to be "soliciting material" or to be "filed" with the Securities and Exchange Commission, nor shall such information be deemed to be incorporated by reference into any such filings under the Securities Act or the Exchange Act.*

## **Stock Option and Compensation Committee Report on Executive Compensation**

### **Compensation Philosophy**

The Company applies a consistent compensation philosophy for all employees, including senior management. This philosophy is to recognize effort, but pay for performance. The Company establishes aggressive goals and objectives at the beginning of each year, and provides incentives to its employees and management by awarding a percentage of their compensation based on achieving these goals and objectives. By linking compensation to performance, the Company seeks to ensure that the interests of its employees are closely aligned with those of its shareholders.

The Company recognizes that competition for qualified personnel within the semiconductor industry is intense. A competitive total compensation package is necessary to attract, motivate and retain employees of the highest caliber.

### **Compensation Vehicles**

Compensation at the Company has three principal components: Salary, Cash Bonuses and Equity Compensation.

#### *Salary*

The Company targets base salaries at the 50th percentile of comparable companies within the semiconductor industry as well as other high-technology firms. To ensure this position, the Company consults surveys that track other leading companies, many of which are included in the RDG Technology Composite Index.

#### *Cash Bonuses*

The Company includes all of its employees in the rewards of achieving its financial targets. Profit Sharing is paid to all employees who do not participate in a separate cash incentive program. Bonus participation is targeted at top management performers within the Company, and payments are designed to be a significant part of their compensation. Bonuses are based upon achievement of corporate goals and individual objectives. Corporate goals are expressed in a financial plan that includes profitability targets as well as other goals, such as inventory turns. Individual objectives depend on the role of each employee in the Company, and include such matters as sales within a particular market or to specific customers, inventory turns and technological achievements. If the corporate goals are achieved, bonuses are approved by the Stock Option and Compensation Committee (the "Compensation Committee") and distributed to participating executive officers and employees based on the achievement of their individual performance objectives.

#### *Senior Executive Bonus Plan*

During the year ended December 31, 2004, the Company maintained a senior executive bonus plan program. The Compensation Committee approved specific performance targets under the bonus plan for the fiscal year ended December 31, 2004. Bonuses are paid under the bonus plan only if performance goals set by the Company at the beginning of each fiscal year were actually achieved. Accordingly, the actual bonuses paid (if any) varied depending upon actual performance. For the fiscal year ended December 31, 2004, the Compensation Committee compared the Company's actual performance to targeted performance for the year and applied the bonus formula

to this actual performance. This calculation resulted in \$ 3,230,983 in bonuses being paid to executive officers under the senior executive bonus plan.

### *Equity Compensation*

In addition to cash bonuses, the Company intends to utilize grants of restricted shares and awards of stock bonuses to provide additional long-term incentives for the named executive officers and other employees. Stock option grants are also used to provide additional incentives for these individuals and the stock option grant guidelines are reviewed annually to ensure their competitiveness. Participation in the program is based on industry competitive practices, the employee's individual performance and the employee's ranking within the Company. The Company offers these incentives to participating employees in a manner that is consistent with the Company's long-term goals and objectives through equity ownership.

### **Performance Measures and CEO and Executive Compensation**

The Compensation Committee strongly believes that management should be motivated and incentivized to improve the operating performance and cash flow of the Company, not just the Company's stock price. Management should focus its efforts on successfully growing earnings and revenues and increasing asset utilization, which efforts should eventually manifest themselves in an increase in the Company's stock price. The Compensation Committee believes that this management focus should drive better performance, provide correct incentives and ultimately result in superior long-term returns to the Company's shareholders.

Mr. Hill's base salary for the fiscal year ending December 31, 2005 has been established at \$ 840,000. His base salary was determined in part by comparing the base salaries of chief executive officers at other companies of similar size.

The bonus awarded to Mr. Hill is based on achievement of corporate goals. The criterion for payment of bonuses for fiscal 2004 was calculated based upon net after-tax profits and asset turnover. Because the net profit after-tax (NPAT) threshold approved by the Board was achieved, Mr. Hill as well as the executives eligible for cash incentive compensation each received some bonus; because the targeted values for NPAT and asset turns were not fully achieved, they did not receive as high a bonus as they might have if the goals had been met. Mr. Hill received an annual bonus in 2004 equal to approximately 128.2% of his base salary whereas he would have received a bonus of 150% of his base salary had the goals been met. The criteria for payment of bonuses for fiscal 2004 were calculated based upon a 14% after-tax profit margin on a shipments basis, adjusted for certain one-time charges, and an adjusted asset turnover factor of 1.27. Mr. Hill was also granted 350,000 stock options in 2004.

When the Compensation Committee and the Board met in June 2004, the Company's business had improved significantly and the Chief Executive Officer and senior management recommended restricted stock grants to high value employees. The Compensation Committee approved these grants and also the grant of 75,000 shares of restricted stock to Mr. Hill. The restricted stock grants specify that 50% of the shares will vest when the Company has four consecutive quarters totaling \$ 2.5 billion of revenue and the remaining 50% will vest on June 11, 2009. In the event that the Company has not had four consecutive quarters totaling \$ 2.5 billion of revenue, all of the shares will vest on June 11, 2009.

Since October 1, 1998, the Company and Mr. Hill have been parties to an employment agreement. The agreement was amended and restated in 2005. The main changes include the addition of clauses in the event of a change in control of the Company and the provision of retirement benefits analogous to those provided to former executive officers of the Company. For a more detailed discussion of the agreement, see "Employment Agreements" earlier in this Proxy Statement.

### **Compensation Policy Regarding Deductibility**

It is the Company's policy to make reasonable efforts to cause executive compensation to be eligible for deductibility under section 162(m) of the Internal Revenue Code. Under Section 162(m), the federal income tax deductibility of compensation paid to the Company's Chief Executive Officer and to each of its four other most highly compensated executive officers may be limited to the extent that such compensation exceeds \$ 1 million in any one year. Under Section 162(m), the Company may deduct compensation in excess of \$ 1 million if it qualifies as "performance-based compensation," as defined in Section 162(m).

In the recent past, compensation paid to the Company's Chief Executive Officer and to each of its four other most highly compensated executive officers has been deductible by the Company even though certain compensation may not have qualified as "performance-based compensation." However, it is possible that non-qualifying compensation paid to the Company's executive officers may exceed \$ 1 million in a taxable year and therefore limit the deductibility by the Company of a portion of such compensation. For example, each of the Company's executive officers has been granted restricted stock that will vest over the next several years based upon either a time based vesting schedule or the achievement of certain performance goals. Please see the Summary Compensation Table for more details regarding such restricted stock awards.

The Company does not expect base salary cash compensation paid to each of the Company's executive officers subject to Section 162(m) to exceed \$ 1 million for fiscal 2005, and therefore expects all such cash compensation to be deductible.

SUBMITTED BY THE STOCK OPTION AND  
COMPENSATION COMMITTEE OF THE  
BOARD OF DIRECTORS

J. David Litster  
Youssef A. El-Mansy  
Yoshio Nishi  
William R. Spivey  
Delbert A. Whitaker



## AUDIT COMMITTEE REPORT

The Audit Committee assists the Board in fulfilling its responsibilities to the shareholders with respect to the Company's independent auditors and corporate accounting and reporting practices as well as the quality and integrity of the Company's financial statements and reports. The Board of Directors has adopted a written charter for the Audit Committee that details the responsibilities of the Audit Committee which is attached as Appendix B to this Proxy Statement. Since the effective date of the Sarbanes-Oxley Act of 2002, the Audit Committee has become responsible for the appointment, compensation and oversight of the work of the Company's independent auditors.

With regard to the fiscal 2004 audit, the Audit Committee discussed with the Company's independent auditors the scope, extent and procedures for their audits. Following completion of the audits, the Audit Committee met with the independent auditors, with and without management present, to discuss the results of their examinations, the cooperation received by the auditors during the audit examination, their evaluation of the Company's internal controls over financial reporting and the overall quality of the Company's financial reporting.

Management has the primary responsibility for the Company's financial statements, reporting process and systems of internal controls. In fulfilling its responsibilities, the Audit Committee reviewed and discussed the audited financial statements in the Annual Report on Form 10-K with management. Discussion topics included the quality and acceptability of the accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the financial statements.

The independent auditors are responsible for expressing an opinion on the conformity of the audited financial statements with generally accepted accounting principles. The Audit Committee reviewed and discussed with the independent auditors their judgments as to the quality and acceptability of the Company's accounting principles and such other matters as are required to be discussed under generally accepted auditing standards pursuant to Statement of Auditing Standards No. 61. In addition, the Audit Committee received from the independent auditors written disclosures and a letter regarding their independence as required by the Independence Standards Board Standard No. 1, discussed with the independent auditors the auditors' independence from management and the Company, and considered the compatibility of non-audit services with the auditors' independence.

In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the Board (and the Board subsequently approved) the inclusion of the audited financial statements in the Annual Report on Form 10-K for the year ended December 31, 2004 for filing with the Securities and Exchange Commission.

In addition, the Audit Committee has selected Ernst & Young LLP as the Company's independent auditors for the fiscal year ending December 31, 2005, and the Board of Directors concurred with such selection. The Audit Committee has recommended to the shareholders that they ratify and approve the selection of Ernst & Young LLP as the Company's independent auditors for the fiscal year ending December 31, 2005.

Finally, the Audit Committee reviewed management's process designed to achieve compliance with Section 404 of the Sarbanes-Oxley Act of 2002 and received periodic updates regarding management's progress.

SUBMITTED BY THE AUDIT COMMITTEE OF  
THE BOARD OF DIRECTORS

Ann D. Rhoads  
Neil R. Bonke  
Glen G. Possley  
D. James Guzy (1)

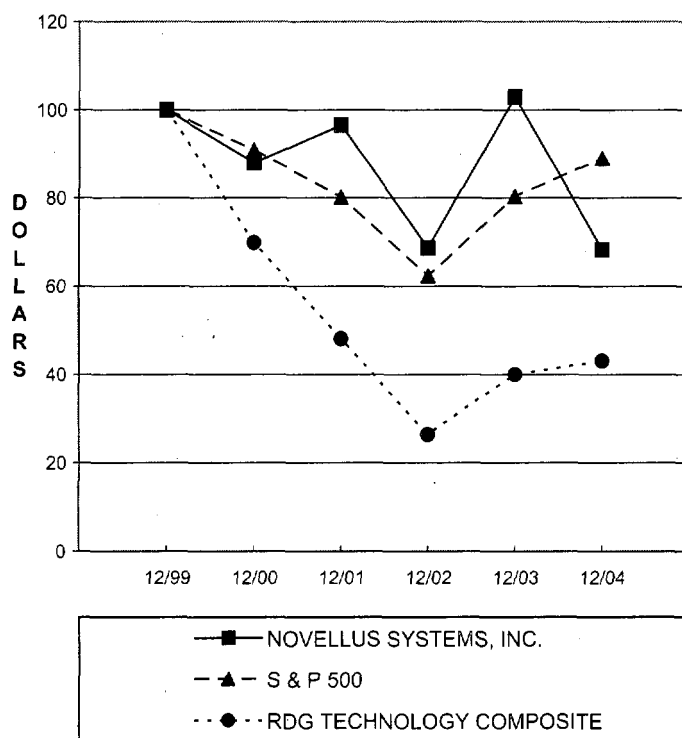
- 
- (1) Mr. Guzy became director emeritus of the Company in April 2004. As a director emeritus, Mr. Guzy is invited to attend Board and committee meetings, but he has no voting rights.

## Performance Graph

The following line graph compares the annual percentage change in (i) the cumulative total shareholder return on the Company's Common Stock since December 31, 1999 with (ii) the cumulative total shareholder return on (a) the Standard & Poor's 500 Index, and (b) the RDG Technology Composite Index. The comparison assumes an investment of \$ 100 on December 31, 1999 and reinvestment of dividends, if any. The stock price performance shown on the graph is not necessarily indicative of future price performance.

### COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\*

AMONG NOVELLUS SYSTEMS, INC., THE S & P 500 INDEX  
AND THE RDG TECHNOLOGY COMPOSITE INDEX



\*Assumes an investment of \$ 100 on December 31, 1999 or index-including reinvestment of dividends. Based on fiscal year ending December 31.

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[www.researchdatagroup.com/S&P.htm](http://www.researchdatagroup.com/S&P.htm)

	Cumulative Total Return					
	12/99	12/00	12/01	12/02	12/03	12/04
Novellus Systems, Inc. ....	\$ 100.00	\$ 87.99	\$ 96.59	\$ 68.75	\$ 102.95	\$ 68.28
Standard & Poor's 500 Index ....	100.00	90.89	80.09	62.39	80.29	89.02
RDG Technology Composite .....	100.00	69.88	48.14	26.35	39.98	43.08

## Security Ownership of Certain Beneficial Owners and Management

The following table sets forth the beneficial ownership of the Company's Common Stock as of March 1, 2005 as to (a) each director and nominee, (b) each named executive officer, (c) all current officers and directors as a group, and (d) each person known by the Company, as of December 31, 2004, to beneficially own more than 5% of the outstanding shares of its Common Stock.

Beneficial Owner	Beneficial Ownership (1)	
	Number of Shares	Percent of Total
T. Rowe Price Associates, Inc. (2) .....	10,836,243	7.71%
100 E. Pratt Street Baltimore, MD 21202		
Entities affiliated with Amvescap PLC. (3) .....	9,718,736	6.92%
11 Devonshire Square London EC2M 4YR England		
Richard S. Hill (4) .....	1,339,436	0.95%
Wilbert van den Hoek (5) .....	705,025	0.50%
Jeffrey C. Benzing (6) .....	651,034	0.46%
Sasson Somekh (7) .....	137,500	0.10%
Glen G. Possley (8) .....	128,000	0.09%
Thomas St. Dennis (9) .....	102,677	0.07%
William R. Spivey (10) .....	92,000	*
J. David Litster (11) .....	79,000	*
Yoshio Nishi (12) .....	46,000	*
Delbert A. Whitaker (13) .....	46,000	*
Ann D. Rhoads (14) .....	36,000	*
Neil R. Bonke (15) .....	22,545	*
Youssef A. El-Mansy (16) .....	21,000	*
All current officers and directors as a group (17 persons) (17) .....	4,044,555	2.82%

\* Less than 0.07%

- (1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of Common Stock subject to options held by that person that are currently exercisable or exercisable within 60 days of March 1, 2005 are deemed outstanding. Such shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of each other person. Applicable percentages are based on 140,498,865 shares outstanding on March 1, 2005, adjusted as required by the rules. To the Company's knowledge, except as set forth in the footnotes to this table and subject to applicable community property laws, each person named in the table has sole voting and investment power with respect to the shares set forth opposite such person's name.
- (2) Based on a Schedule 13G filed with the Securities and Exchange Commission on February 14, 2005, T. Rowe Price Associates, Inc. has sole voting power with respect to 1,480,792 shares and sole dispositive power with respect to 10,836,243 shares as of December 31, 2004.
- (3) Based on a Schedule 13G filed with the Securities and Exchange Commission on February 14, 2005, AIM Advisors, Inc. has sole voting and dispositive power with respect to 7,358,870 shares, AIM Private Asset Management has sole voting and dispositive power with respect to 273 shares, INVESCO Asset Management (Japan) Limited has sole voting and dispositive power with respect to 21,000 shares, AIM Capital Management, Inc. has sole voting and dispositive power with respect to 1,654,150 shares, INVESCO Institutional (N.A.), Inc. has sole voting and dispositive power with respect to 678,887 shares, and INVESCO Asset Management GmbH has sole voting and dispositive power with respect to 5,556 shares as of December 31, 2004.
- (4) Includes (i) options to purchase an aggregate of 1,092,623 shares which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 125,000 shares subject to further vesting restrictions, (iii) 5,618

shares held by Mr. Hill's spouse, (iv) 2,000 shares held by Mr. Hill's spouse subject to further vesting restrictions and (v) options to purchase an aggregate of 35,856 shares held by Mr. Hill's spouse which will be fully vested and exercisable within 60 days of March 1, 2005.

- (5) Includes (i) options to purchase an aggregate of 596,800 shares which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 32,300 shares subject to further vesting restrictions, (iii) 2,314 shares held by Mr. van den Hoek's spouse, and (iv) options to purchase an aggregate of 1,600 shares held by Mr. van den Hoek's spouse which will be fully vested and exercisable within 60 days of March 1, 2005.
- (6) Includes (i) options to purchase an aggregate of 393,370 shares which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 21,800 shares subject to further vesting restrictions, (iii) 632 shares held by Mr. Benzing's spouse, (iv) 17,000 shares held by Mr. Benzing's spouse subject to further vesting restrictions, and (v) options to purchase an aggregate of 217,600 shares held by Mr. Benzing's spouse which will be fully vested and exercisable within 60 days of March 1, 2005.
- (7) Includes (i) options to purchase an aggregate of 62,500 shares which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 65,000 shares subject to further vesting restrictions.
- (8) Includes options to purchase an aggregate of 74,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (9) Includes (i) options to purchase an aggregate of 37,500 shares which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 65,000 shares subject to further vesting restrictions.
- (10) Includes options to purchase an aggregate of 74,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (11) Includes options to purchase an aggregate of 74,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (12) Includes options to purchase an aggregate of 46,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (13) Includes options to purchase an aggregate of 46,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (14) Includes options to purchase an aggregate of 36,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (15) Includes options to purchase an aggregate of 22,545 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (16) Includes options to purchase an aggregate of 18,000 shares which will be fully vested and exercisable within 60 days of March 1, 2005.
- (17) Includes (i) options to purchase an aggregate of 3,131,060 shares held by the current officers and directors which will be fully vested and exercisable within 60 days of March 1, 2005, (ii) 363,100 shares held by the current officers subject to further vesting restrictions, and (iii) indirect holdings attributable to executive officers in the amount of 282,620 shares.

## **OTHER MATTERS**

### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Securities Exchange Act of 1934, as amended requires the Company's executive officers and directors, and persons who own more than 10% of a registered class of the Company's equity securities, to file an initial report of ownership on Form 3 and changes in ownership on Forms 4 or 5 with the Securities and Exchange Commission (the "SEC") and The Nasdaq Stock Market. Such officers, directors and 10% shareholders are also required by SEC rules to furnish the Company with copies of all Section 16(a) forms they file.

Based solely on its review of the copies of such forms received by it, or written representations from certain reporting persons that no Forms 5 were required for such persons, the Company believes that its executive officers, directors and 10% shareholders complied with all Section 16(a) filing requirements applicable to them.

### **Other Business**

The Company knows of no other matters to be submitted at the Annual Meeting. If any other matters properly come before the Annual Meeting, it is the intention of the persons named in the enclosed form of proxy to vote the shares they represent as the Board of Directors may recommend.

Whether or not you expect to attend the Annual Meeting of shareholders in person, you are urged to submit your proxy as soon as possible so that your shares can be voted at the Annual Meeting in accordance with your instruction. You may submit your proxy (1) over the Internet, (2) by telephone, or (3) by signing, dating and returning the enclosed Proxy Card by mail in the postage-prepaid envelope provided to ensure your representation and the presence of a quorum at the Annual Meeting. If you send in your Proxy Card or submit your proxy over the Internet or by telephone and then decide to attend the Annual Meeting to vote your shares in person, you may still do so. Your proxy is revocable in accordance with the procedures set forth in the Proxy Statement.

### **ANNUAL REPORT ON FORM 10-K**

**UPON WRITTEN REQUEST TO THE CORPORATE SECRETARY, NOVELLUS SYSTEMS, INC., 4000 NORTH FIRST STREET, SAN JOSE, CALIFORNIA 95134, THE COMPANY WILL PROVIDE WITHOUT CHARGE TO EACH PERSON SOLICITED A COPY OF THE 2004 ANNUAL REPORT ON FORM 10-K, INCLUDING FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES FILED THEREWITH.**

THE BOARD OF DIRECTORS

Dated: March 21, 2005

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## APPENDIX A

### CORPORATE GOVERNANCE COMPARISON CHART

#### Corporate Governance Guidelines Novellus Systems, Inc. Compliance

	Corporate Governance Guidelines	Novellus Compliance	Comments
<b>A.</b>	<b>Board of Directors</b>		
1.	The board is controlled by greater than 75% of independent directors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.	The governance and nominating committee is comprised solely of independent outside directors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3.	The stock option and compensation committee is comprised solely of independent outside directors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4.	The company has a committee that oversees governance issues and the committee has met in the past year.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5.	The full board of directors is elected annually.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6.	There are between nine and twelve directors serving on the board.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
7.	The board is authorized to increase or decrease the size of the board without shareholder approval.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Our bylaws allow our board to increase or decrease its size within a range of six to eleven members.
8.	The CEO serves on the boards of two or fewer other public companies.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9.	No former CEO of the company serves on the board.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10.	The company has a designated lead director.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11.	The company has governance guidelines that have been publicly disclosed.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12.	A mandatory retirement age for directors has been disclosed.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
13.	The company has established and disclosed term limits for directors.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Members of the board stand for re-election each year and can be removed by the shareholders in certain circumstances.
14.	The company has disclosed its policy that the board reviews its performance regularly.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
15.	The company has disclosed its policy that outside directors meet regularly without the CEO present.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16.	The company has disclosed that a board-approved CEO succession plan has been discussed and adopted.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
17.	Board members have express authority to retain outside advisors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Corporate Governance Guidelines		Novellus Compliance	Comments
18.	All directors attended at least 75% of the board meetings in the past year or have a valid excuse if attendance is less than 75%.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
19.	Vacant board seats are filled by directors elected by shareholders.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
20.	The company has a policy that limits the number of other boards on which a director may serve.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Our Principles of Corporate Governance recommend that directors limit their board memberships to six.
21.	The company has a publicly disclosed policy that directors are required to submit a letter of resignation upon a job change.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
22.	The Chairman is an independent director.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The Chairman is also CEO.
23.	The CEO is not a party to any "related party" transactions.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Please see "Certain Relationships and Related Transactions" in our Proxy Statement.
24.	One or more directors have participated in a director education program accredited by a corporate governance organization.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>B. Shareholder Voting Rights</b>			
1.	Shareholders have cumulative voting rights in director elections.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.	Shareholders may act by written consent.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>C. Takeover Defenses</b>			
1.	The company does not have a poison pill in place.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.	A simple majority vote of shareholders is required to amend the charter or bylaws.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3.	The board may not amend the bylaws without shareholder approval.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	In certain cases, amendment of our bylaws requires shareholder approval.
4.	Shareholders may call special meetings.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5.	The company is subject to a control share acquisition statute.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Our stance on this matter is beneficial to our shareholders.
6.	The company is subject to a freezeout provision.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Our stance on this matter is beneficial to our shareholders.
7.	The company is subject to a fair price provision.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Our stance on this matter is beneficial to our shareholders.
8.	The company has opted out of any state stakeholder law provision.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Our stance on this matter is beneficial to our shareholders.
9.	A simple majority vote of shareholders is required to approve a merger.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10.	The company is incorporated in a state without anti-takeover provisions.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	



Corporate Governance Guidelines		Novellus Compliance	Comments
<b>D. Capitalization</b>			
1.	Common stock and blank check preferred stock are authorized.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>E. Equity Compensation/Ownership</b>			
1.	All directors with more than one year of service own stock.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Please see "Security Ownership of Certain Beneficial Owners and Management" in our Proxy Statement.
2.	Option repricing is prohibited without shareholder pre-approval	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3.	Options have not been repriced without shareholder approval during the past three years.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4.	All stock-based incentive plans have been approved by shareholders.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The remaining 2,212,316 shares available for grant have been approved by our shareholders, with the exception of 172,424 shares that have been approved by our board.
5.	Executives are subject to stock ownership guidelines	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
6.	Directors are subject to stock ownership guidelines.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7.	There are no interlocks among compensation committee members.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8.	Directors receive all or a portion of their compensation in the form of equity.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9.	Non-employee directors do not participate in the company's pension plan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10.	Average options granted in the past three years meets a target percentage of basic shares outstanding.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The indicated "Yes" does not give effect to the impact of other corporate governance metrics on recommendations regarding approval of equity plans.
11.	The company's option plans do not provide for company loans to employees.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12.	The company expenses stock option grants on its income statement.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Not required at this time.
<b>F. Audit</b>			
1.	The audit committee is comprised solely of independent directors.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.	Fees paid to the company's independent auditing firm for non-audit services are less than fees paid for audit and tax compliance services.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3.	The company has disclosed its policy on auditor rotation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Partner rotation is required; audit firm rotation is not required.
4.	The company's selection of an independent auditing firm has been put up for shareholder ratification.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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**APPENDIX B**  
**AUDIT COMMITTEE CHARTER**

**NOVELLUS SYSTEMS, INC.**  
**CHARTER OF THE AUDIT COMMITTEE**

**February 3, 2005**

**AUTHORITY AND PURPOSE:**

The Audit Committee (the "Committee") of Novellus Systems, Inc. and its subsidiaries (collectively, the "Company") is appointed by the Company's Board of Directors (the "Board") to oversee the accounting and financial reporting processes of the Company and audits of the financial statements of the Company. In so doing, the Committee shall endeavor to maintain free and open means of communication between the members of the Board, the Company's independent auditor and the financial management of the Company.

The Committee has the authority to undertake the specific duties and responsibilities listed below and will have the authority to undertake such other specific duties as the Board from time to time prescribes.

**MEMBERSHIP:**

The Committee members (the "Members") will be appointed by the Board based on the recommendation of the Governance and Nominating Committee, and will serve at the discretion of the Board. The Committee will consist of at least three (3) members of the Board. The following membership requirements shall apply:

1. Each Member must be "independent" as defined in NASD Marketplace Rule 4200(a)(15).
2. Each Member must meet the criteria for independence set forth in Rule 10A-3(b)(1) promulgated under the Securities and Exchange Act of 1934, as amended (the "Act"), subject to the exemptions provided in Rule 10A-3(c) under the Act.
3. Each Member must be able to read and understand fundamental financial statements, in accordance with the rules of the NASD applicable to Nasdaq listed issuers.
4. Each Member must not have participated in the preparation of the financial statements of the Company or any current subsidiary of the Company at any time during the past three (3) years.
5. At least one (1) Member must have past employment experience in finance or accounting, requisite professional certification in accounting, or other comparable experience or background which results in such Member's financial sophistication, including being or having been a chief executive officer, chief financial officer or other senior officer with financial oversight responsibilities.

Notwithstanding subparagraph 1. above, one director who: (a) is not independent as defined in NASD Marketplace Rule 4200; (b) meets the criteria set forth in Section 10A(m)(3) under the Act and the rules promulgated thereunder; and (c) is not a current officer or employee of the Company or Family Member (as defined in NASD Marketplace Rule 4200(a)(14)) of such an officer or employee, may be appointed to the Committee if the Board, under exceptional and limited circumstances, determines that membership on the Committee by the individual is required by the best interests of the Company and its shareholders, and the Board discloses, in the Company's next annual proxy statement subsequent to such determination, the nature of the relationship and the reasons for that determination. A Member appointed under the exception set forth in the preceding sentence must not serve longer than two (2) years and must not serve as chairperson of the Committee.

If a current Member of the Committee ceases to be independent under the requirements of subparagraphs (1) and (2) above for reasons outside the Member's reasonable control, the affected Member may remain on the Committee until the earlier of the Company's next annual shareholders meeting or one (1) year from the occurrence of the event that caused the failure to comply with those requirements; provided, however, that when relying on the exception set forth in this sentence, the Committee shall cause the Company to provide notice to

Nasdaq immediately upon learning of the event or circumstance that caused the non-compliance. Further, if the Committee fails to comply with the requirements set forth in this "Membership" section of this charter (the "Charter") due to one (1) vacancy on the Committee, and the cure period set forth in the preceding sentence is not otherwise being relied upon for another Member, the Company will have until the earlier of its next annual shareholders meeting or one (1) year from the occurrence of the event that caused the failure to comply with the requirements to rectify such non-compliance; provided, however, that when relying on the exception set forth in this sentence the Committee shall cause the Company to provide notice to Nasdaq immediately upon learning of the event or circumstance that caused the non-compliance.

#### **POWERS:**

The Committee shall have the power to conduct or authorize investigations into any matters within the Committee's scope of responsibilities. The Committee shall be empowered to engage independent legal, accounting or other advisors, as it determines necessary to carry out its duties.

While the Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Committee to plan or conduct audits or to determine that the Company's financial statements are complete and accurate and are in accordance with generally accepted accounting principles ("GAAP"). Generally, management is responsible for preparing the Company's financial statements and determining that they are complete and accurate and are in accordance with GAAP and the independent auditor is responsible for planning and conducting the audit under the supervision of the Committee and expressing an opinion on the financial statements. The Board and the Committee are in place to represent the Company's shareholders. Accordingly, the independent auditor is ultimately accountable to the Committee.

#### **RESPONSIBILITIES:**

In fulfilling its purposes as stated in this Charter, the Committee shall undertake the specific responsibilities listed below and such other responsibilities as the Board shall from time to time prescribe, and shall have all powers necessary and proper to fulfill all such responsibilities. Subject to applicable Board and shareholder approvals, the Committee shall:

##### *Financial Statement and Disclosure Matters*

1. Review the policies and procedures adopted by the Company to fulfill the Company's responsibilities regarding the fair and accurate presentation of financial statements in accordance with GAAP and applicable rules and regulations of the Securities and Exchange Commission and the National Association of Securities Dealers applicable to Nasdaq-listed issuers.
2. Oversee the Company's accounting and financial reporting processes.
3. Oversee audits of the Company's financial statements.
4. Review with the Company's independent auditor, management and informal auditors any information regarding "second" opinions sought by management from an independent auditor with respect to the accounting treatment of a particular event or transaction.
5. Review and discuss reports from the Company's independent auditor regarding (a) all critical accounting policies and practices; (b) all alternative treatments of financial information within GAAP, including ramifications of the use of such alternative disclosures and treatments and the treatment preferred by the auditor; and (c) all other material written communications between the independent auditor and management, such as any management letter or schedule of unadjusted differences.
6. Review before release the unaudited interim financial results in the Company's quarterly earnings release.
7. Review and discuss with management and the Company's independent auditor the Company's financial statements (including disclosures made under "Management's Discussion and Analysis of Financial

Condition and Results of Operations”) prior to the filing with the Securities and Exchange Commission of any report containing such financial statements.

8. Review the independent auditor’s report on its audit of the Company’s financial statements.
9. Prepare and approve the report in the Company’s proxy statement in accordance with the requirements of Item 306 of Regulations S-K and Item 7(d)(3)(i) of Schedule 14A.
10. If deemed appropriate, recommend to the Board that the Company’s audited financial statements be included in the Company’s Annual Report on Form 10-K.

*Matters Regarding Oversight of the Company’s Independent Auditor*

11. Be responsible for the appointment, compensation, retention and oversight of the work of any registered public accounting firm engaged (including resolution of disagreements between management and the auditor regarding financial reporting) for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Company; provided that each such registered public accounting firm shall report directly to the Committee.
12. Receive and review a formal written statement and letter from the Company’s independent auditor delineating all relationships between the independent auditor and the Company consistent with Independence Board Standard 1, as may be modified or supplemented.
13. Actively engage the independent auditor in a dialogue with respect to any disclosed relationships or services that may impact the objectivity and independence of the independent auditor.
14. Take, or recommend that the Board take, appropriate action to oversee and ensure the independence of the Company’s independent auditor.
15. Monitor the hiring of employees and former employees of the Company’s independent auditor.
16. Preapprove all audit and audit related services and permissible non-audit services (including the fees and terms thereof) to be provided by the independent auditor to the Company, to the extent required under applicable law and the rules of the NASD applicable to Nasdaq-listed issuers; provided, however, that (a) the Committee may delegate to one (1) or more designated Committee Members the authority to grant the preapprovals required by the foregoing sentence if the decisions of any Committee Member to whom authority is delegated hereunder are presented to the Committee at its next-scheduled meeting; and (b) all approvals of non-audit services to be performed by the independent auditor must be disclosed in the Company’s applicable periodic reports.
17. Ensure that the Company’s independent auditor: (a) has received an external quality control review by an independent public accountant (“peer review”) that determines whether the independent auditor’s system of quality control is in place and operating effectively and whether established policies and procedures and applicable auditing standards are being followed; or (b) is enrolled in a peer review program and within 18 months receives a peer review that meets acceptable guidelines in accordance with Nasdaq requirements.
18. Meet with the Company’s independent auditor prior to its audit to review the planning and staffing of the audit.
19. Discuss with the independent auditor the matters required to be discussed by Statement on Auditing Standards No. 61, as modified or supplemented, relating to the conduct of the audit.
20. Review with the Company’s independent auditor any audit problems, difficulties or disagreements with management that the independent auditor may have encountered, as well as any management letter provided by the independent auditor and the Company’s response to that letter, including a review of:  
(i) any difficulties encountered in the course of the audit work, including any restrictions on the scope

of activities or access to required information; (ii) any changes required in the planned scope of the internal audit; and (iii) the Company's internal audit department's responsibilities, budget and staffing.

21. Oversee the Company's independent auditor rotation of its lead (or coordinating) audit partner having primary responsibility for the audit and the audit partner responsible for reviewing the audit at least every five (5) years.

#### *Matters Regarding Oversight of the Company's Internal Audit Function*

22. Review the Company's annual audited financial statements with management, including a review of major issues regarding accounting and auditing principles and practices, and evaluate the adequacy and effectiveness of internal controls that could significantly affect the Company's financial statements, as well as the adequacy and effectiveness of the Company's disclosure controls and procedures.
23. Review major changes to the Company's auditing and accounting principles and practices as suggested by the Company's independent auditor, internal auditors or management.
24. Review the appointment of, and any replacement of, the Company's senior internal auditing executive.
25. Review the significant reports to management prepared by the Company's internal auditing department and management's responses.

#### *Matters Regarding Oversight of Compliance Responsibilities*

26. When requested by the Board, advise the Board with respect to the Company's policies and procedures regarding compliance with applicable laws and regulations.
27. Obtain reports from the Company's management, senior internal auditing executive and independent auditor that the Company's subsidiaries and foreign affiliated entities are in compliance with applicable legal requirements, including the Foreign Corrupt Practices Act.
28. Establish procedures for (a) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and (b) the confidential, anonymous submission by the Company's employees of concerns regarding questionable accounting or auditing matters.
29. Review all related party transactions for potential conflicts of interest on an ongoing basis and approving all such transactions (if such transactions are not approved by another independent body of the Board).
30. Review and address any concerns regarding potentially illegal actions raised by the Company's independent auditor pursuant to Section 10A(b) of the Act, and cause the Company to inform the SEC of any report issued by the Company's independent auditor to the Board regarding such conduct pursuant to Rule 10A-1 under the Act.
31. Obtain from the independent auditor assurance that it has complied with Section 10A of the Securities Exchange Act of 1934.

#### *Additional Responsibilities*

32. Review and assess the adequacy of this Charter annually and recommend any proposed changes to the Board for approval.
33. Confirm management's awareness that it is management's responsibility for developing and maintaining adequate internal controls and disclosure controls over financial reporting.
34. Review with the Company's outside counsel and internal legal counsel any legal matters brought to the Committee's attention that may have a material impact on the financial statements, the

Company's compliance policies and any material reports or inquiries received from regulators or governmental agencies.

35. Provide oversight and review of the Company's asset management policies, including an annual review of the Company's investment policies and performance for cash and short-term investments.
36. Take any other actions that the Committee deems necessary or proper to fulfill the purposes and intent of this Charter.

In addition to the above responsibilities, the Committee will undertake such other duties as the Board delegates to it, and will report, at least annually, to the Board regarding the Committee's examinations and recommendations.

#### **MANAGEMENT SUPPORT:**

The Company shall provide the Committee with appropriate funding, as determined by the Committee in its capacity as a committee of the Board, for the payments of: (1) compensation to any registered public accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Company; (2) compensation to any independent advisers retained by the Committee in carrying out its duties; and (3) ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

#### **MEETINGS:**

The Committee will meet at least four (4) times each year. The Committee may establish its own schedule which it will provide to the Board in advance. A majority of the Members of the Committee shall constitute a quorum for the transaction of business.

The Committee will meet separately with the principal executive officer and separately with the principal financial officer of the Company at least annually to review the financial affairs of the Company. The Committee will meet with the independent auditor of the Company, at such times as it deems appropriate, to review the independent auditor's examination and management report.

#### **MINUTES:**

The Committee will maintain written minutes of its meetings, which minutes will be filed with the minutes of the meetings of the Board.

#### **REPORTS:**

The Committee will provide reports to the Board of the Company regarding recommendations of the Committee submitted to the Board for action, and copies of the written minutes of its meetings. The chairperson of the Committee (or other Member designated by the chairperson or the Committee in the chairperson's absence) shall regularly report to the Board on its proceedings and any actions that the Committee takes.

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Novellus Systems, Inc. is a leading supplier of thin film deposition, surface preparation  
equipment used in the manufacturing of today's  
semiconductors. The company's innovative products and technologies are  
critical in the high-volume production of leading-edge semiconductor devices, and  
are produced at the lowest possible cost.

Headquartered in San Jose, California, Novellus maintains subsidiaries  
throughout the United States, Europe, Asia and the Pacific Rim. Novellus is an S&P 500  
company and a component of the Nasdaq-100 Index. The company's stock is traded on the  
Nasdaq stock exchange under the symbol NVLS.



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